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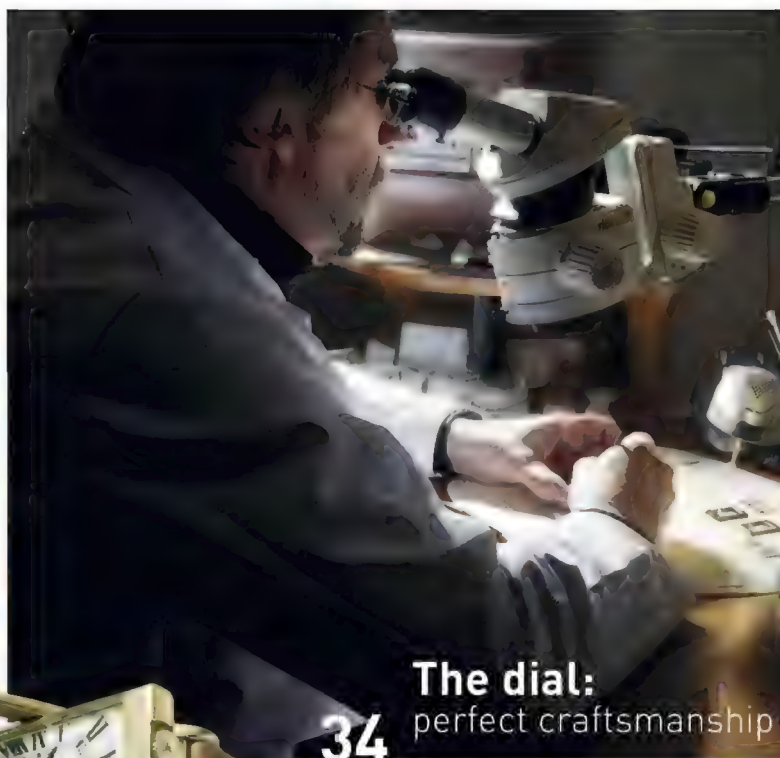
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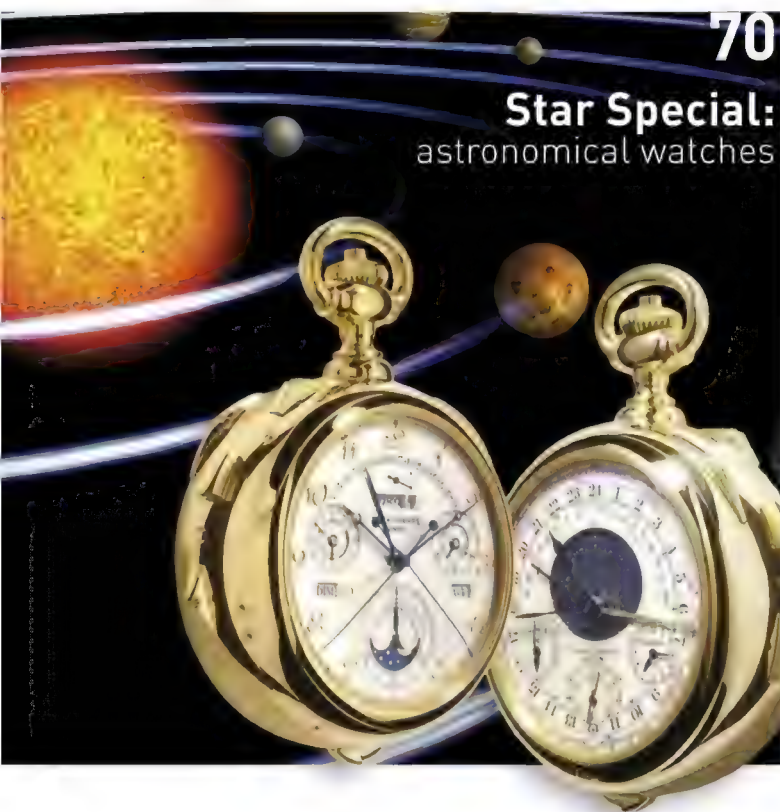
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astronomical watches

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Read more about it on page 83.

AP
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Le maître de l'horlogerie depuis 1875



Jules Audemars
Dual Time to Millenary 4101



KAREL HUBERT, INTERNATIONAL EDITOR-IN-CHIEF



TIMOTHY BARBER, EDITOR UK

“A NEW ERA”

When we started publishing our glossy watch magazine almost 12 years ago we intended “Horloges” (as it was then called) to be a truly international publication. Yes, it was published in Dutch, but the articles were about watches, brands, history, technology and design. Only a small number of pages were dedicated to the Dutch and Belgian watch scene. This focus on international content made it easy for us to start an English edition, which we did five years ago. The international articles were translated and our experienced UK editor John Goodall made sure the UK watch world was well represented.

Now, at the end of 2011, we may state 00/24 WatchWorld has become the ultimate international watch magazine. It is published in seven countries – including Scandinavia – and we are proud to announce the birth of a North-American edition this month. Gary George Girdvainis has joined our team as publisher and American editor of this new edition. With a total circulation of approximately 70,000 copies, it has become the number one watch magazine.

A magazine is a living thing. It grows, learns and eventually becomes mature. This will only work if it is produced by a group of people who combine professionalism with passion, curiosity with the flexibility to adapt to new challenges. So it is with great pleasure I can announce another improvement in our organisation. Experienced journalist and watch lover Timothy Barber has joined our editorial team as our new UK editor; I thank John Goodall for all his efforts over the last years. It has been a privilege working together with him. Nick Edgley, up until now responsible for all our commercial activities in the UK, will from now on be acting as publisher of our UK edition. With Nick and Timothy I’m sure 00/24 WatchWorld will become an even better magazine. Please take a look at www.0024watchworld.co.uk to find out more about our multiple activities and to follow Timothy’s blog on watches.

“WONDERFUL WATCH WORLD”

Very few of the people I know who make a living from writing about fine watches began their journalistic careers with any expertise in the area at all. For most of us it is something that we chanced upon and looked into out of strange curiosity. Before we knew it, we’d tumbled down the rabbit hole.

In my case this happened a bit less than 4 years ago. As a features writer with a London business newspaper I was tasked with looking into this strange little world, and quickly discovered it was less a world, more a universe – a strange one, indeed, but a place full of fascinating stories, compelling ideas and beautiful creations. I founded a watch supplement with that newspaper, began freelancing on the subject, and have been going deeper down the rabbit hole ever since. It is an honour to be taking on editing this magazine from John Goodall and I’m looking forward to taking the magazine into its next phase. I very much hope you will enjoy reading our magazine, and joining us on the journey.



International editor-in-chief Karel Hubert gives his unvarnished opinion about time-related matters on the 00/24 WatchWorld website. Scan the code with your mobile phone for direct access.



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A WATCH CASE IS ROUND... ISN'T IT?



Every year an estimated 1.2 billion watches are produced. The vast majority have a round case and a round dial, but of course there are exceptions. There are square, rectangular, octagonal and dodecagonal cases. There are oval and tonneau-shaped cases and cases shaped like a cushion. There are even watches with triangular cases and some small brands have the courage to create fantasy shapes. But for every watch with a different case shape, another 999 with a round case see the light of day.



AUDEMARS PIGUET ROYAL OAK OFFSHORE



TIMOTHY BARBER
Editor 00/24 WatchWorld UK

"On the 17th of August 2011 the world lost Gérald Genta. The genius designer whose geometric obsession brought us two of the most famous non-round watches, the Audemars Piguet Royal Oak and the Patek Philippe Nautilus. Also Louis Cartier is important, like the Tank, Tortue and Santos watches. Interesting to note, that the brand is now making (very big) round watches. Perhaps next year's celebration of the 40th anniversary of Genta's Royal Oak will inspire a few more designers to step out of the circle once again."



BAUME & MERCIER HAMPTON



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1/3 IS SOMETHING OTHER THAN ROUND

This may be remarkable, but it is not inexplicable. Ever since the first church clocks in the 13th century dials have been round, a logical consequence of the circular path of the hands. It is therefore the shape of the dial that has determined the shape of the case and not the other way around. You could say that we are so used to reading the time on a round dial that watchmakers take quite a chance if they want to confront us with a different shape. Which is why all watches with non-round cases still have a more-or-less round dial: the hour indicators are still in a kind of circle, even in the case of the octagonal Royal Oak (Audemars Piguet), the square Hampton Square (Baume & Mercier), BR 01 (Bell & Ross) and Classe Royale (Edox), the dodecagonal Admiral's Cup (Corum), the cushion-shaped Senator Sixties Square Chronograph (Glashütte Original) and the tonneau-shaped Conquistador Grand Prix Automatic (Franck Muller).

It therefore has to be round, historical and practical. But still, for manufacturers there is a good reason to question this dogma. In the autumn of 2009 00/24 WatchWorld published an overview of the 100 most special watches: icons with respect to design and/or technology. In content this top-100 did not differ very much from what watch aficionados worldwide consider the Premier League of watches. And 33 of these 100 watches have... a case that is not round. A considerable percentage of the world's top watches are therefore anything but round, from the Royal Oak to the Nautilus, from the Reverso to the Monaco. Apparently a different case shape helps to create the distinction that is so important in the market. And if that is taking things too far, striking crowns or crown protectors also help to divert attention from the obligatory round shape.

AROUND THE CLOCK

Movements, and especially electronic movements, can be made in any conceivable shape. In reality that means watch designers have total freedom when it comes to the shape of the watch. It is often said that designers are increasingly influenced by marketing people who think they know, in advance, what will and won't be successful. From a statistical point of view a non-round case helps sell the better watches. But marketing people also know that the average customer is looking for anything but distinction. Joe Bloggs is quite happy with the round average. ■



BRITTA ROSSANDER
Editor-in-chief 00/24 WatchWorld
Scandinavia

"An analogue display through hands fixed in the middle of a circle gives a rounded form to the case. If the time display is digital, it is easier to play with the form of the case. But you can't forget user-friendliness. The case must not rub, all the space in the case must be utilised for the movement, the time must be easy to read, etc. However, the square and rectangular cases are justifiable alternatives. One very successful case with an "eccentric" form is of course Reine de Naples by Breguet which is in the shape of an egg."



KRISTIAN HAAGEN
Editor 00/24 WatchWorld Scandinavia

"Round and round it goes. But not always. Look at Richard Mille's tonneau-shaped watches. But then he introduced the round models RM 032 as well as the super slim RM 033, because he wanted to show that he could create watches in different shapes than the tonneau-shape. Indeed he created something different. He always has and, I hope, always will. There was a time when Planet Earth was thought to be flat. But then we got smarter. You could compare with that certain watchmakers' ways of thinking. Not everything is how it was. Nor should it be."



ELLEN STOFFELS
Editor 00/24 Horloges the Netherlands

"Round, square or tonneau-shaped... What's better from an aesthetic point of view is purely a matter of taste, and that is something personal. Moreover, a non-circular case is no longer an exception: every watch collection has one different case shape, doesn't it? In terms of functionality there's one important thing: a round case with the same dial is - in my opinion - the best way to show what it is all about: time. For technical reasons that can be questionable though, especially when you add in complications. All these things make the choice for a round or square case very difficult."



Do you want to know more about this topic? Karel Hubert and Kristian Haagen have a blogbattle "The case is a coffin" on www.0024watchworld.co.uk.

Super BREITLING

1 Colt

Breitling has completely redesigned the Colt and has created a rugged, contemporary watch. There are three versions: a 3-hand watch (the Colt 44, 44mm, with SuperQuartz movement, water resistant to 500m, with date, prices start at £1,850), a chronograph (the Chronograph II, 44mm, with SuperQuartz movement, water resistant to 300m, with date, prices start at £2,300) and a ladies watch (the Colt 33, prices start at £1,750). All models are available with different coloured dials and straps or bracelets of leather, rubber or steel.

The anagram HAUTLENCE

2 HLQ Classic

Anagram enthusiasts will see it right away: Hautlence is an anagram of Neuchâtel. Not a good one, because the town name has an "a" on the "a" and Hautlence doesn't. And to confuse things even more, the brand today is based in La Chaux-de-Fonds. But never mind. Fortunately it is an interesting brand which, since its establishment in 2001, has been making watches that look truly different. Take the HLQ Classic, for example. The time is shown on two separate dials for the hours and minutes. The jumping hours are displayed digitally, while the minutes are shown on a retrograde scale. The 44mm gold case has screwed-on lugs. Of this watch, which has a hand-wound *manufacture* movement, 88 copies will be made.

ORIS and the RAID Suisse-Paris Rally

3 RAID 2011 Limited Edition

Oris is a partner of the RAID Suisse-Paris Rally, a rally from Basel to Paris that was first organised in 1991 and in which only cars pre-dating 1975 can participate. Occasionally this results in tie-in watches, in this case a chronograph and a watch with a mechanical alarm that both get their looks from the dashboard of the 1953 Austin Healey 100M which won the rally in 2010. The RAID 2011 will be produced in an edition of 500 copies with its steel case and automatic movement. The alarm watch is even more exclusive: only 50 pieces will be produced. Both watches feature the RAID Suisse-Paris logo on the case-back and are presented in a beautiful wooden case. Price: approximately £2,750.

CHOPARD triple-certified

4 L.U.C Triple Certification Tourbillon

This is the first watch with three certifications: COSC, the Geneva Seal and the Fleurier Quality Label. Obviously this is proof of the high quality of the watch, but should we expect anything less from Chopard? The 43mm case is made of rose gold, while the hand-wound movement is a proprietary L.U.C *manufacture* calibre and a tourbillon, with a diameter of 29.7mm. Thanks to 4 serial-linked spring barrels this movement has a 9-days power reserve. The watch is limited to 100 pieces. Price: 120,000 Swiss francs.





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Minute repetition at EDOX

1 Cape Horn 5 Minute Repeater

Edox is increasingly becoming a technically interesting brand. The new Cape Horn 5 Minute Repeater is a good example. This watch features an Edox 87 movement in a 45mm steel case; this is the automatic ETA calibre 2892-A2 with a module that was made by Dubois Dépraz and houses the so-called 5 minute repeater. With this complication, which was invented by Samuel Watson in 1710, it is possible to make the time audible: the system strikes the hours and the number of times that 5 minutes have passed. It is an interesting alternative on the normal minute repetition (which strikes the hours, quarter-hours and minutes that have passed after the quarter-hours) and the Répétition à Quarts, known from Chronoswiss, among others, which strikes the hours and quarter-hours. This movement, which was previously used by Edox in earlier limited editions (and which shows strong similarities to an older movement that Dubois Dépraz made for Kelek) can be seen in all its glory through the transparent dial. The balance wheel is visible through a "porthole" in the case-back. The 5 Minute Repeater will be produced in an edition of 30 pieces. Prices start at £15,500.

JAEGER-LECOULTRE doubles

2 Duomètre à Quantième Lunaire Limited Edition

At the 2007 introduction of the first Duomètre Jaeger-LeCoultre indicated that the movement, with what is essentially a dual power system, was devised to give complications their own power source so that the normal movement can continue to function uninterruptedly and therefore more accurately. Consequently, new Duomètre variants with complications continue to be revealed.

The Duomètre à Quantième Lunaire Limited Edition is the latest. The hand-wound calibre 381 with two independently functioning spring barrels (you wind them by rotating the crown clockwise and anti-clockwise) shows the time using two seconds hands. One is a central hand, the other a jumping seconds hand showing 1/6th of a second increments; the mechanism of this seconds hand links the two drives together and this linkage makes it possible to stop the time display while the movement continues to tick as usual. Pulling out the crown resets both seconds hands to

zero while leaving the escapement running. Pushing the crown reactivates both hands simultaneously making it possible to set the time exactly. The movement also shows the date and the moon phase; the latter is so accurate that it only needs to be adjusted once every 3 years (using a push-button at w 12 o'clock). The 42mm case is made of white gold. This Duomètre à Quantième Lunaire will be produced in an edition of 200 pieces and is available for approximately £27,500.



4

BELL & ROSS is feeling blue

3 BR 03 Blue Ceramic

The number of variants on the family of square Bell & Ross watches, which started long ago with the BR 01, is huge by now. The variety comes mainly from the use of different materials and dial colours. Take the new BR 03 Blue Ceramic, for example. The case is made of blue ceramic material and measures 42 x 42mm. The black dial has the characteristic big numerals at 12, 3, 6 and 9 o'clock, this time in blue Luminova, which also covers the indicators. The rubber strap is also blue. The case houses the automatic ETA calibre 2892. Prices start at £2,550.

4 BR S

This year Bell & Ross also expanded the BR S line. The BR S Heritage has a ceramic case made of ceramic and the BR S Steel – you guessed it – has a case made of steel. The watches in the collection are available from £1,350-2,200.

5

5 Vintage WW1 Heritage

This is a watch that, with regard to its design, harks back to the First World War. The Heritage has a black steel case and a dial with the two concentric rings that were typical of the dual scale of that era. There is also a version with a matt grey case and an old looking strap, the Military. Prices start at £1,900.



RADO'S thinnest watch

1 True Thinline

The watch world loves records and if there is a record to be claimed, it will do so. According to the manufacturer the new Rado True Thinline is the "thinnest high-tech ceramic watch in the world". We believe them. There are a few different models in black and white: the ceramic case of the very thinnest model is 4.9mm thick, the quartz movement measures 1.2mm and the watch itself weighs 35g (available for approximately £1,150). There is also a version in black with an automatic movement (ETA calibre 2892-A2) and a rubber or ceramic strap. Although this version is still called the True Thinline, it is 7.75mm thick and costs approximately £1,200.

100 years of EBEL

2 Classic Sport Chrono

In the year the brand turns 100, Ebel upholds a simple principle: the past is simply too beautiful to not revive. And so a chronograph with classical lines has been made to reinforce the Classic Sport line. The 41mm case is made of polished and brushed steel and the bracelet comes from the well-known steel model. A rubber strap is also available, with a folding clasp. There is a choice of a black or silver-coloured dial. The movement is Ebel's quartz calibre 503. The Classic Sport Chrono costs approximately £1,700.

Special CONCORD chronograph

3 C2 Neo Black

The Concord C2 is one of the most remarkable chronographs of recent years. This is purely because of the design of the case and lugs, because the movement (ETA calibre 2894-20) is good but nothing special. In this latest version the 43mm steel case has been given a black PVD coating, the dial is black and the black rubber strap has a black steel folding clasp. The small seconds hand is not a hand at all but a rotating disk. The chronograph is water resistant to 100m. Prices start at £4,000.

HAMILTON is going back to the 1940s

4 Khaki UTC

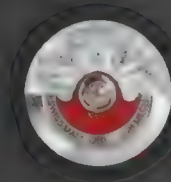
Hamilton continues to look for and find inspiration for its new models in its own past. The new Khaki UTC is based on models that Hamilton made for the aviation and shipping industry back in the 1940s. A steel case (42mm, water resistant to 300m) houses the automatic ETA calibre 2893 which has the time in a second time zone as an extra function. This second time is adjusted using a push-button at 2 o'clock. The auxiliary time zone is displayed using a three-letter airport code in a window next to the crown, which is located at 9 o'clock. There is a choice of a white, silver-coloured or grey dial. The strap is made of rubber or leather. Prices start at £800.





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BAUME & MERCIER and Hampton Beach

1 Hampton

The Hampton has always been one of the most important models for Baume & Mercier. Well, maybe not always... The brand has existed since 1830 and the first Hampton dates from 1994. For the new collection, of course once again with the characteristic rectangular case, designer Alexandre Peraldi was inspired by the sunny weather on the coast of Hampton Beach and by a classic Baume & Mercier watch from the 1940s. Curved lines, elegant shapes and classical, plain dials characterise these new models. There are men's and women's models: the men's line consists of an automatic watch (ETA calibre 2895) with a small seconds hand and a chronograph (ETA calibre 2894) with a slightly bigger case. There is a choice of steel and rose gold. Prices start at £900.

WEMPE is the Time Master

2 Zeitmeister

When German jeweller Wempe returned to making watches the brand quickly became popular. That's partly due to the fact that the antique observatory in Germany's watch paradise Glashütte was painstakingly restored and turned into the official headquarters of the Wempe watch division, as well as becoming the official chronometer testing institute. Even its beautiful telescope was restored. New in Wempe's popular Zeitmeister line is a model with a big time and date indicator in two time zones. The 42mm steel case has the modified automatic ETA calibre 2892-A2, which has been certified in accordance with German chronometer requirements. Prices start at £1,900. Also new in the same

line is an aviator's watch that has been given a hand-wound Unitas 6498-2 movement. The 45mm case is made of matt steel. The strap is hand-made from shell-cordovan. The price is a tidy £1,300. Wempe watches are sold in the Wempe shops in Germany (15 locations), Paris, Vienna, Madrid and New York. See page 46 for an in-depth feature on the expansion of Wempe's London boutique.

GRAHAM takes a dive

3 Chronofighter Oversize Diver

We don't want to be petty about it, but we have never yet seen a plane that can dive as well as fly. And we don't mean dropping a few thousand feet in the air, but a proper underwater dive. Apparently, however, Graham wants to make us believe that such a thing does exist, with its new Chronofighter Oversize Diver. This is the youngest scion in the family of Chronofighter pilot watches, with their striking trigger for operating the chronograph. The movement is a G1734, which is based on a Valjoux 7750. The watch, with the big 47mm steel case with black PVD coating, features a helium valve and has a black rubber strap with ceramic clasp. It is water resistant to 330m and costs 10,500 Swiss francs.

4 Silverstone Stowe GMT Blue & Yellow

New in Graham's Silverstone collection is the Silverstone Stowe GMT Blue & Yellow, which stands out right away because of the colour combination on the carbon dial. Apart from the yellow hands that indicate the hours, minutes and seconds the watch also has a number of subsidiary dials for the 30-minute and 60-seconds counter, a tachymeter scale – useful for measuring the time over a certain distance – and a double date aperture. The outer ring of the dial shows the time in a second time zone. The 48mm case houses the G1721 calibre. The movement has a 48-hour power reserve. A striking yellow stripe has been incorporated in the black rubber strap with its tyre profile. The watch is available in a limited edition of 250. Price: 9,900 Swiss francs.



TAG HEUER renews the Link

5-8 Link

The Link made its debut in 1987 under the secretive name "S/el" (Sport & Elegance). In 1999 TAG Heuer completely redesigned the model and named it "Link". Interesting detail: initially the S/el was not very popular but by the start of the 1990s the line made up 40% of the brand's turnover. The secret: the bracelet with its steel links consisting of two S-shaped segments. It was and still is the most comfortable metal bracelet ever made. In 2007 another special model was added, a chronograph with the rapidly ticking calibre S movement.

And now there is the new Link. The bracelet has been subtly restyled, but has kept its special shape. The case was redesigned and is no longer entirely made of brushed steel but is partially polished. The bezel features engraved numerals filled in with black lacquer. The most striking innovation: the dial (black or silver) has a vertical line pattern and a monochrome, hand-engraved TAG Heuer logo. The hour indicators are made of polished steel.

TAG Heuer has made four models of the new Link. The chronograph (7) with calibre 16 has a 43mm case. There is a watch (8) with calibre 6 and a small seconds hand, date and 40 mm case. Another model (6) with calibre 5 has a big seconds hand and big day and date indicators. The top model is a chronograph (5) with a perpetual, retrograde calendar. The 43mm case has the aforementioned electromechanical calibre S, which enables time measurement to 1/100th of a second. All Link models are water resistant to 100m. The Link models costs approximately: calibre 5 £1,900, calibre 6 £1,800, calibre S £2,100 and calibre 16 £2,500.

Limited FORTIS

1 B-42 Big Date

Fortis will not be celebrating its 100th anniversary until next year, but is anticipating this big occasion with a limited edition, the B-42 Big Date. It is a classical pilot watch that closely follows the other B-42 models, but has a big day and date indicator at 9 and 3 o'clock. When you buy the watch you can choose whether you would like to be told what day it is in German or English. The case is made of brushed steel or black coated steel. There will be 500 copies made of each version. The automatic movement is the F2014 calibre based on an ETA movement. The strap is made of leather with contrasting white stitching. Price on application.

SEIKO is aware of the environment

2 Solar

There is no getting away from it any more: everything is "green" these days. Organic products, cleaner fuels, more economic use of gas, water and electricity... Seiko has been aware of this concept for a while, because in 1977 the brand introduced its first Solar watch. Since then the concept has been developed further and further, with the major breakthrough being the "solar cell", which is capable of creating energy from all kinds of light. This means the battery never needs to be replaced and the watch is maintenance free. The new Solar has a

"normal" dial and it is almost impossible to tell that it is actually a solar panel. Two chronographs with a steel bracelet or a leather strap and two titanium models, a chronograph and an analogue watch, have been added to the Solar collection. The watches are available from a very reasonable £260.

BULOVA ACCUTRON one happy island

3 Curaçao

Bulova Accutron was named after Joseph Bulova, who immigrated to the United States in 1870 from Bohemia (a historical region in Czechoslovakia, now the Czech Republic). In 1875 he opened a jewellery store in Manhattan, New York, and in 1911 Bulova started making watches and clocks. A year later he opened a branch in the Swiss town of Biel/Bienne, where movement components were produced and movements assembled. Bulova grew into a major brand, also as a result of its innovative marketing (in 1941 Bulova broadcast the world's first TV commercial!) and social commitment. For example, in 1945 the company opened a watchmaking school to be able to give wounded American soldiers a new start in life. Bulova was a highly innovation-oriented company that produced the first electric clocks in 1932, followed in 1961 by the Accutron, a watch with an electronic tuning fork movement. These days the name of that legendary watch is incorporated in the brand name.

With its new Curaçao collection Bulova Accutron introduces a series of diver's watches that are water resistant to 300m. It is a series of watches with a 42mm steel case with or without a black or rose gold PVD coating. There are two models: a watch with a mechanical, automatic Sellita calibre SW200 and a chronograph with the Ronda 5030.D quartz movement. These watches come with a metal or rubber strap. Prices start at £1,100.

ALPINA clocks the stars

4 Startimer Manufacture

Only 888 copies will be made of this watch and that is a pity, really, because it is too beautiful for restrictions. The Alpina Startimer Manufacture was designed to celebrate the 5th anniversary of the Alpina manufacture (and that of parent brand Frédérique Constant). It is a classically styled watch with a 44mm rose gold case. The automatic movement is visible through the sapphire crystal case-back. The leather strap does not close at the inside of the wrist as usual, but at the top. Alpina supplies the watch in a special box with a scale model of a Cessna Citation Mustang aircraft to underline the collaboration with the aircraft manufacturer and aviation company PrivatAir. Price: approximately £6,800.



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Redesign of the AEROWATCH 1942

1 1942

The small and sophisticated Aerowatch has updated its 1942 chronograph. The brand, which was established in 1910, introduced the 1942 line seven years ago. This watch, which will be made in an edition of 500, has a neatly decorated, automatic Valjoux 7751 movement, a 42mm steel case with a sapphire crystal case-back and a brown leather strap with folding clasp. Price on application.

UHR with a Valjoux 7750

2 UHR 461

In Germany there are quite a few people who combine their knowledge of watches with business acumen. One of them is Rudolf Fischer from Flein. He is the man behind UHR, a watch brand that has made it its objective to make tried-and-tested technology available at remarkably low prices. Take the new UHR 461, for example. It is a sturdy chronograph in a steel case and with a steel bracelet. The case in question houses the most renowned chrono movement of all times, the Valjoux 7750. The watch costs approximately £400.

OMEGA and the Apollo 15

3 Speedmaster Moonwatch "Apollo 15" 40th Anniversary Limited Edition

The fact that Omega and NASA have a close bond is no secret to anyone. The fact that the brand enjoys reminiscing about this bond is also obvious. They are doing so once again with the Speedmaster Moonwatch "Apollo 15" 40th Anniversary Limited Edition, a watch that memorises the fact that the Apollo 15 was launched 40 years ago as the fourth in a total

of six journeys to the moon. It is a classical Speedmaster with a brushed and polished steel case and bracelet, an aluminium bezel insert and an unbreakable crystal of hesalite. The minutes scale is blue, white and red, the colours of the Apollo 15 mission patch. The rings around the subsidiary dials for the seconds, 12-hour and 30-minute counters also have these three colours. Engravings on the case-back recall the Apollo mission. A total of 1,971 copies of the Speedmaster will be made. Price: approximately £3,800.



MAÎTRES DU TEMPS works with rolls

4 Chapter One

In this young brand the experiences of a number of ingenious watchmakers are combined. It leads to unique creations. Chapter One is the work of Christophe Claret, Peter Speake-Marin and Steven Holtzman. The hand-wound movement with tourbillon is made of 558 pieces and shows you the actual time and uses a retrograde mechanism to show the time in a second time zone and the date. Especially the way the date and the moon phase are shown needs some extra attention: by means of two rollers at the top and bottom of the case! That case is made of white or red gold, or titanium.

5 Chapter Two

Chapter Two is the work of Daniel Roth and Peter Speake-Marin and the watch uses also the construction with the roll, but for the day of the week and the month. The watch with automatic movement has a white gold case.

FRÉDÉRIC JOUVENOT looks for the sun

6 INTI

Jouvénot is not your archetypical watchmaker. He trained as a micromechanical engineer and therefore looks at movements from a completely different angle. After working at Minerva for some time he began studying complications. In 2008 he started for himself and in 2010 he was able to set up Jouvénot Manufacture S.A. in La Chaux-de-Fonds with the financial assistance of, among others, Archduke Carl-Peter von Habsburg-Lothringen. Here, special watches are designed and produced in small numbers. The new INTI (named after the sun god of the Incas) is the world's first watch with a jumping heliocentric hour display. Just so you know. Each hour is indicated by a sun ray that comes from the centre of the dial. The twelve sun rays show the bright side of life, as it were. At midday all the rays are bright gold to symbolise the sun at its zenith. As time marches on the rays turn black one by one and at midnight

they are all black. The minutes are indicated by a central cartouche fitted with an index that completes a revolution on the fixed minute disc. The movement has a black gold balance and is hand-wound. The heliocentric complication requires a hundred additional components. The 44mm case is made of rose gold. A total of 88 copies of this watch will be made. Price on application.

HIRSCH provides comfort

7 Lord

Folding clasps have been around for a while. They are available in all kinds of shapes but... they are always made of metal. However practical this may be, it often makes them less comfortable when it comes to wearer convenience. Hirsch (est. 1765) is putting an end to this. The solution is simple: the folding clasp, named Lord, is made of leather like the strap, with a metal press stud that does not touch the wrist. The calfskin strap costs approximately £85 and is available in six colours.

HUBLLOT heads out to sea

1 CFCYCdM

The full name on its birth certificate reads "Hublot Classic Fusion Chronograph Yacht Club de Monaco", hence the acronym in the headline. Hublot has been the official time keeper for the yacht races of the prestigious club since 2005. To celebrate the tenth anniversary of the so-called Classic Week, Hublot came up with a special watch. The 45mm case is polished titanium and the movement has an automatic HUB1143 calibre with a date indicator. The dial, of course, is blue. Strangely enough the watch is water resistant to 50 metres. Price on application.

New Turbines from PERRELET

The Turbine is one of the visual highlights of modern watchmaking thanks to the double rotor that has made Perrelet famous and, in the Turbine, has been incorporated in such a way that the rotation reveals a spectacle on the dial that resembles a slowly turning turbine wheel in a jet engine. Perrelet is obviously enjoying making the best use of this principle in a number of special models.

2 Turbine XL America

In the Turbine XL America the rotor with its 12 blades spins on top of a dial with the red and white stripes of the American flag. The internal bezel features the stars of that same flag. The DLC-blackened steel case has a diameter of 50mm. Perrelet will produce 777 copies of this watch (perhaps a reference to the Boeing of the same name), with a strap made of black rubber. Price: approximately £4,300.

3 Turbine Poker

The Turbine Poker has a smaller 44mm case and the dial underneath the turbine features images of playing cards. The gimmick: by shaking the watch a random card comes up when the rotor stops turning. There are three versions, with different card combinations. Price: approximately £3,700.

4 Turbine Golden Bullet

The latest newcomer is the Turbine Golden Bullet. This watch plays with gold: a central ring as the heart of the turbine; the hour indicators and hands are gilded. The dial also has gold elements, which you can see when the turbine is spinning. Of this watch with its 44mm case (DLC-blackened steel) 888 copies will be made (and that is definitely not a reference to any Boeing). Price: approximately £3,700.





EXOTOURBILLON CHRONOGRAPHE. | The ExoTourbillon Chronographe is the first timepiece in the Montblanc Collection Villeret 1858 to unite a tourbillon and a chronograph function. It is the world's first tourbillon having a balance, being larger than the cage, that oscillates outside of the cage on a higher plane – thus giving rise to the name ExoTourbillon. An innovation so unique a patent has been applied for. *Montblanc manufacture calibre MB M16.60. Monopusher chronograph with regulator-style dial, four-minute tourbillon, 30-minute counter and second time zone with day/night display. 47 mm white gold case. Crafted in the Montblanc Manufacture de Haute Horlogerie in Villeret, Switzerland.* MONTBLANC. A STORY TO TELL.

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THE MIRACLE THAT IS THE WATCH DIAL





Strictly speaking a watch doesn't need a dial. We are so familiar with the position of the hands that we could easily do without a scale of numerals and/or dashes. However, when it comes to the design and appeal of a watch, the dial becomes all important.

So many watches, so many dials. The variations are endless. Hundreds of thousands of different dials must have been designed and produced over the past decades. We can call it perfect craftsmanship on a minute scale, because a round dial with a 40mm diameter has a surface area of just 12.5cm². That's small enough to fit 12 numerals and a few dashes onto it, but it becomes an almost bizarre size if you are trying to put a painting onto it.

SPECIALISATION

It so happens that the *manufacture* of dials was about the first specialisation in the clock and watch industry that was carried out by external masters rather than watchmakers. In the early days the clock dials were understandably plain, but as they became more decorative, more artistic talents were required. The dials for clocks and pocket watches were made almost exclusively of thin, enamelled iron. This surface was also excellent for painting, with glass particles that were applied colour by colour and melted into the background. This is how the decorative, painted dial that was to become especially popular in France was being made as early as the 17th century.

BRASS

The growth of the American watch industry in the 19th century caused a major change. American producers considered it unacceptable that so much went wrong in the *manufacture* of enamelled dials, which were produced in ovens at very high temperatures. This slowed down the watch production considerably. As an alternative the Americans developed a metal dial that was punched out. The numerals were then simply stamped into the dial. Eventually this technology was adopted in Switzerland as well and it is how the dial that is still used most frequently today was developed: a thin sheet of

brass, lacquered, sprayed or electrochemically treated. Fortunately the craftsmanship needed to produce enamelled dials has survived in the smaller studios.

DETAILING

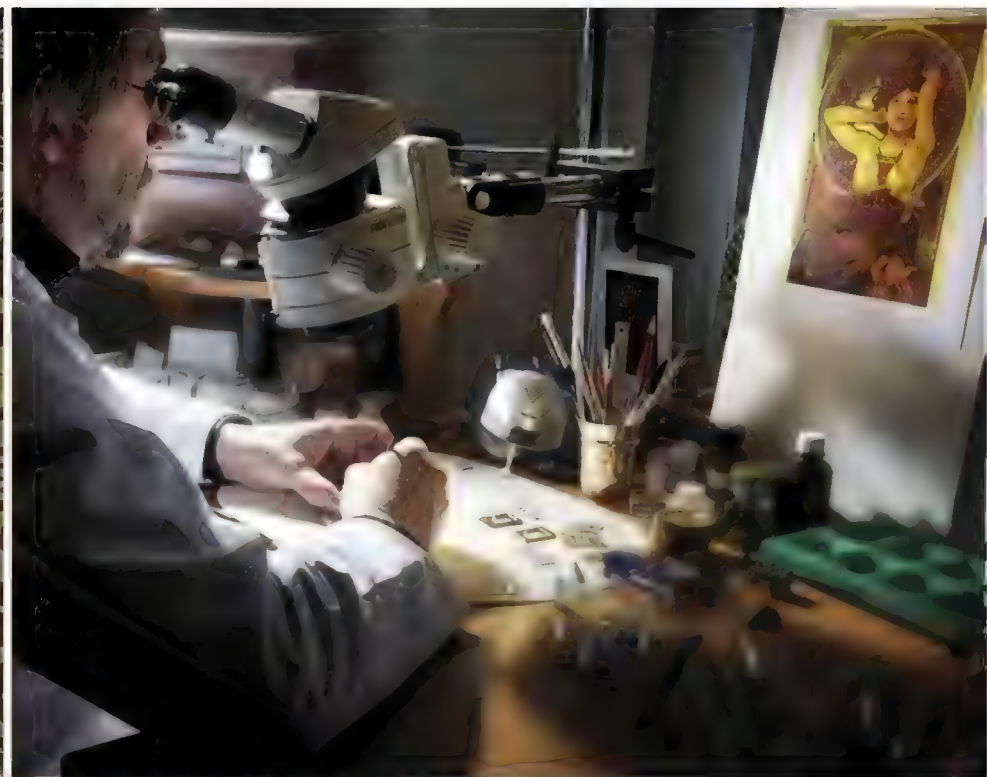
It is not only the classical, enamelled dial that usually comes from a supplier; even the

simpler versions nearly always come from specialist companies, just like in the early days of clockmaking. Increasingly, however, the major watch groups have been ensuring their supply by taking over these kinds of specialists. For example, in 2006 the Swatch Group took over the renowned dial producer MOM Le Prélet.

>>







These days all kinds of modern techniques are used in the *manufacture* of dials. In most cases it works as follows: the basic material is brass, which is punched into the desired shape. In the next step the holes for the spindle that holds the hands are punched or drilled out, along with other elements like date windows. Next the brass is ground flat and polished. If necessary the spaces for subsidiary dials are hollowed out. After comprehensive chemical cleaning a thin layer of silver is applied and subsequently brushed. This is followed by a wafer-thin layer of copper, silver, gold or rhodium, which is subsequently coated in a special lacquer. Numerals and other indicators can be printed onto this lacquer. This can be done even if the dial is spray-painted in a particular colour. On the reverse of the dial two pins are usually soldered into place for

subsequent assembly onto the platine. Sometimes the identifying mark of the dial manufacturer can be seen on the back of the dial. Dials can be further detailed in various stages of the production. They can be engraved, pearlescent, skeletonised, faceted or ground.

PAINTING

These days numerals, indicators and logos are often printed onto the dial using a pad and paint. In this process the numerals and indicators are machine-milled from a sheet of metal, or chemically etched and filled in with paint. A rubber pad is then pressed against the metal to copy all the numerals and indicators. By pressing the pad onto the dial the image is transferred.

More expensive (and better looking) is the method of making indicators and numerals from metal and applying them to the dial manually. And at the top of the class are the dials that are completely hand-made. These may be versions made of precious metals, then engraved and detailed, mounted with diamonds, cut out of mother-of-pearl or all kinds of other beautiful finishes.

But even in 2011, enamelled dials that are made in small editions remain special. Even more exclusive is a dial that is manually painted with enamel using the traditional techniques. Only a few brands, including Jaeger-LeCoultre, still honour this tradition and employ in-house specialists. Others, like Bovet, also offer hand-painted dials, but these are not done in enamel. The customer can supply his own design – a picture of his daughter – or simply ask for an existing painting to be copied in miniature. Anything is possible but one thing is certain: a unique dial will always be very expensive. ■

CARTIER LOOKS FORWARD BY LOOKING BACK

Thought Cartier was a jewellery brand that also makes watches? Its unique Time Art exhibition, set to tour the globe for the next three years, will make you think again.

In a dark room gleaming with jewel-encrusted watches, ingenious Art Deco clocks encased in chunks of rare jade and ancient timepieces in beautifully rendered enamels, what stands out is a small, square, and by contrast rather plain, wrist watch.

ALBERTO SANTOS-DUMONT

Amidst a veritable cloudburst of exotic, artful creations, it is distinct not just for its plainness but its familiarity. Anyone even half-interested in watches will have seen it dozens of times, in watch shops, in airport boutiques, in adverts. It is Cartier's square, screws-in-the-bezel Santos watch, a mainstay of the brand's collection – and it has barely changed in a century. It was, and is, the original Cartier wrist watch.

The first was produced for Louis Cartier's friend, the playboy aviator Alberto Santos-Dumont, in 1904. The watch, powered by a Jaeger movement (as were all Cartier's watches at the time), went

TANK BASCULANTE
WRIST WATCH (1932)



SANTOS WRIST WATCH (1916)



POCKET WATCH WITH MINUTE REPETITION (1927)



ROTONDE DE CARTIER ASTROREGULATEUR



ID ONE CONCEPT WATCH

into production in 1911, and was arguably the first wrist watch that didn't look like a pocket watch, with the integration of the strap an essential part of its case design.

The one on display in Cartier's dazzling Time Art exhibition dates from 1916, the period when trench warfare fuelled the rise of wrist watches over pocket watches, and shows just how powerfully Cartier has maintained its brand DNA ever since. All the essential elements are here: the elegant Roman numerals, the cabochon stone in the winding crown, the mixture of design economy and ineffable, instantly identifiable style.

QUEST FOR EXCELLENCE

Cartier is on a mission to prove how seriously it takes its watch business and the exhibition, filled with early examples of other classics like the Tank, Tortue and Baignoire, has been put together to prove the point. For anyone (and

there are plenty) who thought Cartier was a jewellery brand that happens to make watches, the exhibition is proof positive of a tremendous horological legacy, and one that isn't just about style. A room dedicated to the famous, incredibly rare Cartier mystery clocks, most of them made in the interwar years, reflects Louis Cartier's fascination with the zone where technical brilliance and stylistic excellence intertwine.

EXCEPTIONAL EXPERTISE

Which brings us to the second part of the exhibition, trumpeting the horological ground Cartier is currently breaking. Since its decision to take on full *manufacture* status in 2007, Cartier has committed itself to innovation and breakthroughs as much as simply developing the capability to produce watches fully in-house. Its Fine Watchmaking Collection is made up of some fairly mesmerizing pieces, charismatically displayed

in the exhibition amid holographic animations of the movement's workings. These include the Astroregulateur, an alternative to the tourbillon in which the escapement components are placed on the oscillating mass of the winding system, the Rotonde de Cartier tourbillon single push-piece chronograph, and the Astrotourbillon, in which the tourbillon balance rotates round the dial, acting as a second hand.

Finally, in a room all of its own, is the ID One Concept Watch, which deploys a host of innovative materials and techniques to combat the perennial drawbacks of mechanical technology. As the exhibition progresses around the world for the next three-four years (having now closed at Zurich's Museum Bellerive, its next stop is Singapore's ArtScience Museum from December 14-February 12), it will be interesting to see what new arrivals make it into the section of this enthralling show. ■



CRASH WRIST WATCH (1967)



LARGE "PORTIQUE" MYSTERY CLOCK (1923)



TORTUE WRIST WATCH WITH MINUTE REPEATER (1928)

THE EDOX-X-FILES

Edox was founded in 1884, but when you look at the current collection you see a youthful, vibrant brand. Founder and master watchmaker Christian Rüefli-Flury focused on producing excellent pocket watches. The brand name? The Greek symbol for “hour”. In 1900 he started using the stylised hourglass as his logo.



CHRONORALLY WRC



THE EDOX FACTORY IN LES GENEVEZ

The founder passed away in 1921 and Edox was taken over by Robert Kaufmann-Hug, not a watchmaker but a banker. Still, the man understood the spirit of the time when it came to watches, and turned Edox's focus to producing wrist watches. He was ahead of its time, because it would be some years before most Swiss watch brands took the same step. In 1965 the management of Edox passed into the hands of a cousin of the banker, Victor Flury-Liechti. The ASUAG Group (the predecessor of the Swatch Group) acquired Edox in 1973, which made it a sister brand of, among others, Longines, Mido, Rado, Eterna and Certina. Ten years later Victor Strambini took over Edox.

VICTOR STRAMBINI

Victor Strambini knew everything there was to know about the watch world. The likeable Swiss purchased Edox in 1983, but by then he had already spent most of his life at Montres Vista. Here he gained experience in the production of watches in

lower price ranges, and especially private label watches. Watch aficionados may not be too fond of this part of the watch industry, but a lot of money is made there, and this came in very useful for Strambini. He moved Edox's production from Biel/Bienne to the tiny, idyllic village of Les Genevez where he was born. And he said goodbye to the private label business which Edox, until then, had firmly embraced. From now on only Edox watches would emerge from the Edox premises.

WATER RESISTANT

Edox had an excellent reputation when it came to special watches, especially watches with increased water resistance. As early as 1932 the brand introduced the Amphibia, a water resistant wrist watch with a *savonnette* case and an extra lid covering the crystal. In 1939 there was a striking model fitted with a stop seconds mechanism with a push-button incorporated in the crown. The Delfin, presented in 1961, is now a desirable collector's item. It was one of the first

true diver's watches, water resistant to 200m. A new method the company had developed to seal the crown made it unnecessary to use screws. In 1963 Edox went even further with the Hydro Sub, which was water resistant to 500m. Quite a different innovation was seen in the Bluebird (1969), a watch with a scratch-resistant, specially coated case and crystal; the case had a double back, which provided additional protection against shocks. The most famous watch in the Edox history is the Geoscope. Introduced in 1971, this watch displayed the time in all the times zones by means of a map on the dial that showed the world from the perspective of the South Pole. This map revolved on its axis once every 24 hours, so that the time in all the zones could be read. Strambini made sure that this technical élan was revived. In 1998 Edox presented the Les Bémonts Ultra Slim, a watch with a hand-wound mechanical movement that was a mere 1.4mm high. It was and remains the thinnest movement with a date indicator ever made.



GEOSCOPE



CHRISTIAN RÜFLI-FLURY



LES BÉMONTS ULTRA SLIM



A NEW ERA

These days the management of Edox is in the hands of Victor's son Alexandre and Christian Hotz, who moved from Oris to Edox. The duo gave the brand a tremendous boost with a series of sporty watch lines and smart sponsorship, and kicked off a rich new era. Edox sponsors water sports (the Class-1 World Powerboat Championship and the RC44 sailing class, via Team Dubai) and motorsports (official timekeeper of the FIA World Rally Championship). An interesting detail: earlier in its history, in 1966, the brand made a name for itself as the official sponsor of the Vuelta, the Spanish road cycling race.

COLLECTIONS

No doubt Strambini Jr. and Hotz are envisaging a younger public now. In a smart move, they've divided the collection and are focusing almost exclusively on a price range of £600 to 3,000. At the entry level is the Les Vauberts line with elegant, classical watches with automatic ETA 2824 movements. The Les Bémonts line consists of the ultra-thin models with which Edox made a name for itself in the 1990s. In the sporting arena there is the Class-1 line with chronographs featuring Valjoux 7750 movements that are water resistant to 500m. The Grand Ocean collection is a little less rugged and a little more elegant, with chronographs and a number of different watches. The square, uniquely styled Classe Royale watches provide the necessary variation in an otherwise round product range. And the eye-catching WRC models emphasise the relationship with rallying. The outsider in the Edox collection is the Classe Royale 5 Minute Repeater, a watch that houses a movement with 5-minute repetition. ■



LES VAUBERTS



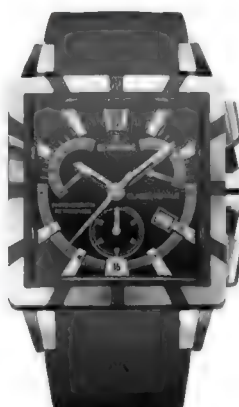
LES BÉMONTS ULTRA SLIM



CLASS-1



GRAND OCEAN



CLASSE ROYALE



CLASSE ROYALE
5 MINUTE REPEATER

MARCUS

THE MOST IMPORTANT
COLLECTION OF WATCHES
IN THE WORLD



GF
GREUBEL FORSEY
Inventeurs Horlogers



INDEPENDENCE

IS A STATE OF MIND

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Automatic chronograph

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Water resistance: 100m / 330ft

Sapphire crystal with antiglare treatment

Alligator full skin strap with folding clasp

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THE SOUND OF THE MINUTE REPEATER

At the Only Watch auction in September the top lot was a Patek Philippe Minute Repeater Tourbillon, selling for well over a million pounds. Due to the complexity of the engineering required, not to mention the musical beauty of the repeater itself as it rings out the minutes and hours, the minute repeater has represented the highest expression of the watchmaker's art since English clockmaker Daniel Quare patented it in the 17th century. 00/24 WatchWorld looks at some of the most enthralling watches to have appeared recently that contain this holy grail of classical watch complications, in which time is not just seen, but heard.

AUDEMARS PIGUET

Millenary Hand-Wound Minute Repeater

A piece reminding us – if we needed reminding – that there's very much more to Audemars Piguet than Royal Oak and Royal Oak Offshore watches. A new addition to the *haute horologique* Millenary range, this handsome minute repeater breaks new ground with a novel escapement design, which combines the high efficiency of a

direct-impulse escapement with the reliability of the Swiss lever escapement. That benefits accuracy, long-term stability and shock-resistance, we're told.



JAEGER-LECOULTRE

Master Grande Tradition

Grande Complication

This eye-catching astronomical piece at the very top end of Jaeger-LeCoultre's offering combines a perpetual calendar, tourbillon and minute repeater – with its star chart dial, a truly spectacular example of the *grande complication*

timepiece. Rather than chiming the passing minutes of the normal 24 hour day, the minute repeater marks the time of the sidereal day – see the in-depth feature on astronomical watches on page 70 for more information.



SEIKO

Credor Spring Drive Minute Repeater

Each of Seiko's most spectacular line of watches, the *grande complication* pieces in Seiko's top-end Credor range are its most spectacular line of watches. Each is hand-made in the company's Micro Artists' Studio in the Japanese Alps – such is the complexity of the craftsmanship that only a handful of watches have been produced since 2006. Designed by Seiko's finest watchmaker, Kenji Shiohara, the watch contains hammers made from Myochin steel, a metal originally intended for Samurai armor that was found to have spectacular sonorous qualities when used for making wind chimes. Incredibly, the same family has produced this steel for over 800 years. Adding to the beauty of the sound is an inner acoustic chamber within the outer casing. Launched at BaselWorld this year, the watch is powered by Seiko's hypnotically smooth Spring Drive mechanism.

ROGER DUBUIS

Excalibur Minute Repeater

Roger Dubuis is revamping its Excalibur collection of watches to give them a slightly more dynamic look and feel, and has marked the remodelling by bringing out a minute repeater version which also includes a tourbillon, visible through a window at 5 o'clock. A limited line of 28 watches are being made.



F.P. JOURNE

Repetition Souveraine

François-Paul Journe rewrites the minute repeater rule book with this ultra slim version, eking a strong, clear tone out of a striking watch that's barely 4mm thick. That's thanks to Journe's flat gong, first seen on his Grande Sonnerie watch. It is actually a rather discrete piece to look at, little different from Journe's Chronometre Souverain, but hiding a superlative mechanism beneath the dial. It is light too, at just 69.6g, an astonishingly low weight for such a complicated piece.



MINUTE REPEATER

HUBLLOT

King Power Cathedral Minute Repeater Tourbillon & Column Wheel Chronograph

Scotching the idea that sonorous metals are best for the chimes of a minute repeater, Hublot this year brought out the world's first such watch made from carbon fiber. It creates a remarkably clear, reverberant chime – Hublot claims it lasts double the length of a regular gong. The three haute horological complications are all visible from the dial side of the watch.



ULYSSE NARDIN

Alexander the Great Minute Repeater Westminster Carillon Tourbillon Jaquemarts

Alexander the Great follows in the footsteps of Genghis Khan in making an appearance on the dial of the latest Ulysse Nardin Jaquemarts watch. Jaquemarts are animatronic figures

that would traditionally appear to chime the time in ancient clocks. Here, the figures move in sync with the sound of the gongs, appearing to swing their weapons against one another. There are four gongs, each with a different tone. Only a 100 pieces will be made.





SERVICE IN TECHNICOLOR

The family-owned German company Wempe combines high-end retailing with production of its own watches. Now its newly-expanded London boutique is offering customers a closer look at their own watches.



In the watch industry, family ownership is still a terrifically powerful notion for the few companies that can claim it – just look at how central it is to the Patek Philippe brand, which is owned and managed in Geneva by the Stern family.

In the world of those who actually sell the watches, it's a more common concept – there are plenty of long-established jewellers and watch shops around that are family businesses. In the UK, Beards in Cheltenham, William & Son in Mayfair and the Boodles business, in the hands of the Wainwright family, are a few that spring to mind.

600 EMPLOYEES

Extending the idea to an international empire of boutiques owned and managed by a single family is a different matter, like Wempe. It's arguably what lies at the heart of the success of Wempe, the German high-end watch and jewellery retailer, and latterly watch producer in its own right. That's certainly the opinion of Lynn Schroeder, the London emissary of the Wempe family, and managing director of their sumptuous boutique on Bond Street. "The owners are personally liable for the company," she says. "Where do you find that, with nearly 600 employees worldwide? We can say to the customer that we have to do things as well as possible because if anything goes wrong the owners are personally affected." She adds: "It's one part of why you should feel confident and trust that you're in good hands with us."

CUSTOMER SERVICE

Here's another. Take your watch along to the Bond Street boutique for a service and you can now inspect its workings on a huge video screen, magnified via a camera designed for keyhole surgery. This way, the in-house Wempe watchmakers can show you any defects up close, explain what steps need to be taken to repair it and give you a precise costing. This is a simple enough innovation but a clever one, and something that will most likely be rolled out to other Wempe stores around the world. It's a key part of a shop expansion and refurbishment that has seen the London boutique – which sells brands including Patek Philippe, Vacheron Constantin, Audemars Piguet and Glashütte Original – become one of the company's flagship premises.

"Customer service has always been on my mind, and I try very hard to come up with new ideas to attract people. Customers will sometimes question why a servicing is so expensive, they want more explanation of any defects or accidental damage to the watch, so this is a way of explaining things a little bit better. Customers need to see, they need to learn, then they can understand it better," says Schroeder, a half-German, half-Scottish woman who has spent all her working life with Wempe. She came to manage its UK operation nine years ago, overseeing growth in both the premises and the figures – in the latter case, continuing double-digit growth despite a difficult economy. As she laughingly admits, the CEO of one well-known watch brand calls her "the steamroller".

MORE THAN 130 YEARS OF HISTORY

If the London store is on the up, so is the company. Wempe – it's pronounced (roughly) "Vem-per", and those mistaking it for a certain burger chain will receive a stern glare from Ms Schroeder – was founded in 1878 by watchmaker Gerhard D. Wempe. A success story of the earlier Twentieth Century that hit a rough patch in the post-war years, it was revitalised in the last three decades by Hellmut Wempe and his daughter Kim-Eva Wempe, with shops opened on Fifth Avenue in New York, Paris, Vienna and even aboard the luxury cruise liner MS Europa.





TESTING CENTRE IN GLASHÜTTE

Among retailers Wempe is unusual in having made the leap from merely selling watches to producing them as well, with its ETA-powered "Zeitmeister" line and elegant – if inelegantly titled – "Chronometerwerke" watches developed in partnership with Nomos.

This is no superficial toe-dip into watch production either – the latter pieces are certified chronometers, and it's Wempe that does the certification. Since Switzerland's COSC organisation decided only to test Swiss-made movements from 2003, Wempe took the bull by the horns and opened its own chronometric testing facility in an old converted observatory in Glashütte, Germany's watchmaking capital.

Putting pieces from German brands such as Glashütte Original and Nomos through their paces, the testing is arguably of a more challenging nature than that found in the COSC process, since it tests the finished watch rather than uncased movements, investigating their accuracy over 15 days in a series of positions. Chalk that one up to German fastidiousness.

Wempe's commitment to the watchmaking and repairing process is such that the company employs around 15 apprentices in its Hamburg HQ and more in its expanded Glashütte factory. In the UK, it's an active supporter of Manchester's British School of Watchmaking. "One of the ideas I like the most is that we're helping to get young people off the streets, showing them the possibilities of the

To have someone on hand showing you what the best thing is you can get for your money, is so important

jobs they can do in this industry," says Schroeder. "It's something that just needs to be communicated, that you can have a very decent and interesting life as a watchmaker."

VALUE FOR YOUR MONEY

In her newly-expanded store, the watchmaking team is brought front-of-house – as well as that dinky surgical camera and screen, there's a workshop where customers can see the technicians in action, rather like having an open kitchen in a restaurant. "There are too many people out there who don't know where to bring their watches, and they don't trust anyone now because they're used to unknowledgeable people giving them advice that they read from a list," says Schroeder. "Then all of a sudden the repair is £200 more than they were expecting and no one can explain to them why. We have the passionate, knowledgeable experts sitting right here."

Schroeder presides over a handsome showroom where large, beautiful clocks tick away between the gleaming wrist watch display cabinets. A graceful staircase spirals up to an upstairs

salesroom – formerly offices – dedicated to jewellery, from which Schroeder intends to give the likes of Tiffany & Co. and Cartier a run for their money. This room alone has received £1.3m in investment.

For watch lovers, though, it's downstairs where the action lies. The ample, beautifully curated displays in its presentation cabinets, windows and huge lobby area make Wempe a paradise for browsers and buyers alike. Schroeder's hearty disapproval of the watch industry's trend towards single-brand stores is in fact a passionate avocation of the service a shop like Wempe offers. "I think you want to see variety, don't you? If you want a pair of shoes, don't you want to try on at least five to make a decision," she says. "I, as a customer, want variety and a sales person who knows about variety. To learn about one watch brand is easy, but to have someone on hand showing me what the best thing is I can get for my money, this is so important. But we are not a retailer like the others," she goes on. "Wempe should be more than that and is more than that." ■

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JEAN-CLAUDE BIVER, HUBLOT

“Be first, be different and be unique”

Hublot's charismatic big cheese, Jean-Claude Biver, wants to welcome you into his world and is opening dozens of stores across the world to do just that. He tells 00/24 WatchWorld about fusion, tradition, Big Bangs and why Hublot is like Ferrari.



Photo: Micha Theiner



OFFICIAL OPENING AT BOND STREET LONDON

Watches, and the watch industry, are not the most important things in Jean-Claude Biver's life. Something of a surprise for a man who has brought two brands, Hublot and Omega, back from the brink and one, Blancpain, back from the dead. No, before watches there is love, a subject on which the Hublot boss will readily expound with New Age fervour – love for family, love for one another, love for life. “We have art, tradition, culture, these are things coming from love and love is our future,” he exclaims at one point, with no hint of irony. And just behind love, there is cheese. At a party back in the summer to launch the suave new Hublot boutique on Bond Street, the shop was stacked high with *fromage* produced by Biver's herd of cows, and guests were sent home with great bundles of the stuff. A few weeks later, at a reception in Monaco to launch Hublot's latest Yacht Club Monaco Classic Fusion Chronograph, Biver had to take his leave half an hour into the event in order to return to Switzerland to tend to his beloved cattle. “A boat must have a captain. My cows, they need their captain to drive them down the mountain, and they have only one captain – me!” he merrily explained to partygoers before dashing off to the helipad.

55 STORES

Nevertheless, the boat Biver captains in the watch world is every bit as glamorous, conspicuous and dedicated to good living as the sleek super yachts that crowd Monte Carlo's marina. Its watches are sported by hip hoppers, athletes, hedge funders and oligarchs, its name is emblazoned across sporting events like Formula 1 and the World Cup and its dedicated boutiques are spreading across the globe. Hublot's London store was the 38th to open in two years, and Biver's really just getting started. “By the end of the year there will be 55, and we

want to achieve 70 to 80 stores by 2015,” he says, or more or less shouts, as we settle into the new shop's lavish leather armchairs. Biver is a boisterous soul whose arms wave, eyes swell and voice rises in bellowing, passionate crescendos as he talks. Well into his sixties, neither his ardour nor his ambition is showing any sign of flagging. In fact, the explosion of Hublot shops is spearheading a significant shake-up in the way watches are bought. With watch companies ever keener to control their own distribution networks and gain direct access to their customers, single-brand boutiques are on the rise in a major way.

There are plenty who will argue that the variety on offer in traditional watch shops is more vital to the consumer than Hublot and some other companies are making out. But Biver sees things differently. Those who buy his watches tend to have done their research and will set out looking specifically for Hublot watches – so the more of them you can show in one dedicated boutique, the better. “When we're in multi-brand stores we can only show a part of our world,” he says. “We want to show you all of our world. That's brought us in a very natural way to say that we want to open our own shops in the major places of the world.”

NICHE PRODUCT

One of the benefits of Hublot's acquisition, in 2008, by LVMH, the world's largest luxury goods group, has been the ability to take out spaces in some of the most prestigious shopping spots, including Madison Avenue in New York, Paris's Place Vendôme, and of course Bond Street. Lounging in the sleek, modernist opulence of the Bond Street store, you see what he means by Hublot's “world”. Amid the leather and suede, holographic displays make watches appear and vanish, animations suddenly play across the





surfaces of glass cabinets, watches pop up on stands and then disappear downwards as you approach them. It's playful and plush.

In fact the brand's glamour, flamboyant designs and growing global reach make it easy to forget that, in volume terms, this is a small operation – last year the company produced just 28,000 watches. And as Biver readily – and, in fact, proudly – admits: “Hublot is a niche product, it's certainly not for everybody, and many people reject it because it's not what they have in their imagination about a luxury watch.”

BIG BANG

What Hublot watches are, is recognisable. The chunky, futuristic Big Bang porthole design, whether rendered in the black carbon of this year's Oceanographique 4000 dive watch or the crisp rose gold contours of the Classic Fusion Chronograph, is as unmistakable as a Rolex Oyster or a Cartier Santos. “We have one product, Big Bang!” he exclaims, thrusting a finger into the air. “We have one shape, the porthole shape! If this product doesn't work, we are bankrupt! It's a danger, but it's an advantage – the advantage is identification.”

The problem is making people buy more than one watch. With such a limited range, the risk is that buyers stick with one piece, where the aim of any luxury brand is to have returning custom from its loyal patrons. The solution, for Hublot, is an endless stream of variations within the product, from limited editions and outré decorations to added complications and technical innovations. It's the latter two areas that are of rising importance for Hublot, particularly since the LVMH-owned brand incorporated BNB Concept, the business of master watchmaker Matthias Buttet. He is tasked with developing high complication, high concept pieces like the remarkable Antikythera piece. A handsome in-house chronograph movement, the Unico, is now being used in select King Power watches and is taking Hublot into watchmaking's current frontier area, the use of silicon.

THE FERRARI EFFECT

“The floor on which you build the future is innovation, creativity, development, technology,” says Biver. Only after all that comes marketing, ironically the thing for which Biver's revered in

Hublot had developed a phenomenal concept to mix materials, like rubber and gold in the same watch

business schools and boardrooms. For instance, the idea of a niche, low-volume brand for the wealthy sponsoring mass-market events like Formula 1 and the World Cup is the kind of anti-logic notion that's rarely seen in the conservative old watch industry. Biver simply calls it “the Ferrari effect”. “Ferrari is known by everybody, but Ferrari is still exclusive. So it is not a contradiction, you can remain very luxury orientated even if everybody knows it,” he says. “When you can't afford it, there's always a chance that one day you might, and if you've seen Hublot in the years before, it will be a natural decision to buy it.”

MINUTE REPEATER IN CARBON CASE

Football, motor racing, superyachts and Hollywood are all a far cry from the stuttering brand Biver took on in 2004. “Originally there were only problems,” he says. “The watches were too small, they were mostly quartz so the product was wrong and the brand had no awareness at all.” However, there was one aspect in which Biver spied Hublot's potential. “Hublot had developed a phenomenal concept to mix materials, like rubber and gold in the same watch. In 1980 (when Hublot was founded, ed.) this was nearly a provocation, it was shocking. That idea we transformed into a

philosophy, and translated it into what we call the fusion.”

The great man leans forward as he warms to his theme, hands gesticulating grandly. “We bring together tradition and future. We are not going to repeat the tradition, we are going to take the tradition and open the windows and let the air and ideas and technology of the future in,” he exclaims, punching the air. “Then we will be able to reinvent somehow the tradition, and make it move to the future.” Phew. Biver sits back again and holds up his wrist, displaying his favourite Hublot watch, a minute repeater made – remarkably – of carbon. “It is the perfect illustration of what fusion can do. A minute repeater is the most classical masterpiece, the masterpiece of the 17th century. But to bring it together in a super-light case in carbon, and to achieve, thanks to carbon, a better sound than ever – that illustrates how fusion can contribute to, and become an asset to, the tradition.”

THE GRANDE FROMAGE OF THE WATCH WORLD

Biver says his arch philosophy is “to be first, be different and be unique.” As the only cheese-producing CEO with a carbon minute repeater, a herd of cows and three major watch brands on his CV that would otherwise have been dust, he's living up to that philosophy pretty well. ■





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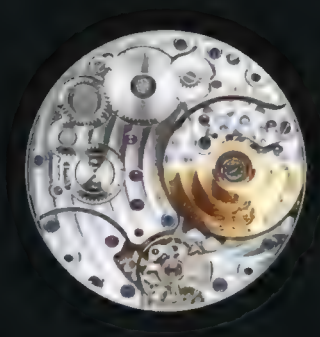
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1926-2011 GEORGE DANIELS

00/24 WatchWorld pays tribute to Dr George Daniels, the British watchmaker reckoned to be among the finest to have lived, who passed away in October.

If the contribution Dr George Daniels made to watchmaking was merely the invention of the co-axial escapement, it would alone have marked him out as a hugely significant figure. The mechanism, an advancement in the imparting of energy through to the balance without the need for lubrication, has been described as the most important development in horology for 250 years. But his contribution was much greater than that. As Roger Smith, Daniels' one-time protégé and inheritor of his legacy, says, he opened the door for independent watchmakers and breathed new life into the art of watchmaking.

HAND-MADE

After an early career spent restoring watches and researching vintage and antique timepieces, he became the first person to master the complete range of skills required to conceive, design and build a watch from scratch, single-handedly. His masterful pocket watches quickly became highly sought-after collectors' items. Starting in the late 1960s, he made just 37 in total but showed the way forward for watchmaking of the highest quality. "In the late Sixties and early Seventies the Swiss watch industry was going through turmoil with the advent of quartz, and they were throwing out all this knowledge. He was saying there is a future to this," says Smith. "He proved that the only way to make a great watch is to make it by hand." According to Smith, Daniels was responsible for creating an environment in which the likes of Philippe Dufour, Peter Speake-Marin, François-Paul Journe and numerous other independent master watchmakers, could operate.

GREAT WATCHMAKERS

It is the aforementioned co-axial escapement with which Daniels will forever be most closely associated. Having first announced his invention in 1976, it took him several years to convince anyone in the Swiss watch industry that this was a worthwhile improvement on Breguet's lever



escapement system. Eventually, it was Swatch Group chairman Nicholas Hayek who showed some faith – since 1999 the co-axial concept has been exclusively used by Omega. "When Daniels was a young boy he'd read books about great watchmakers like Tompion and Mudge who'd all made breakthroughs in horology, and king among these breakthroughs were those around the escapement," says Smith.

CO-AXIAL ESCAPEMENT

He continues: "In restoring antique watches, he'd seen all the escapements go through his hands.

He knew that the lever escapement is inherently wrong, because of its need to rely on lubrication. He invented the co-axial escapement, he told the world it was the best escapement to put into your watches, and there's no doubt technically it's far superior to the lever escapement." Daniels himself was every bit as forthright in stating the excellence of his invention. "The watch industry is by nature very conservative and slow to adopt new things. But basically, every maker who continues with other escapements will ultimately be trampled by the co-axial for the very simple reason that it is better." ■

“ He invented the co-axial escapement, he told the world it was the best escapement to put into your watches ”

SAY IT WITH MUSIC

Breguet's Reveil Musical watch is not just a masterpiece for appearances' sake. The watch contains a patented music mechanism, which plays beautiful music for 20-25 seconds.



When you place your ear next to the watch, crisp notes from a beautiful melody flow over you. The watch is being presented for the first time outside Breguet's head office. The occasion was last summer, at a concert in Lucerne, a small number of journalists had been invited for the presentation. The Classique Complication Le Réveil Musical model is a watchmaker's masterpiece. The work is based on Breguet's new self-winding calibre 0900 with a 55-hours power reserve and just as many jewels, in this case complemented by a fantastic music mechanism.

ROYAL FAVOURITE

Swiss watchmaker Abraham-Louis Breguet opened a watchmaker's shop in Paris way back in 1775. He quickly became the royal favourite, and nobility throughout Europe wanted to wear a Breguet watch. The Queen of France Marie-Antoinette was one of his regular customers, and it is said that it was our Swedish Axel von Fersen who ordered the remarkable watch with all the known complications which today are called "the Marie-Antoinette watch".

Le Réveil Musical is a watch with complications that is truly in the spirit of the legendary Abraham-Louis Breguet. This is a minute repeater which can play a melody instead of just striking the time. The function with a watch that can strike the time was developed before the advent of luminescent digits within the industry, so that people could tell the time even if they had their watch in their pocket or were blind. The complication means that, with the aid of a slide control on the side of the case, people can hear what the time is in hours and minutes. Small hammers in the mechanism are activated via the control, causing them to strike. The watch case acts as a resonating chamber. The more strikes

or notes, the more expensive the watch.

Le Music Réveil is more advanced than that. The watch plays a crystal-clear piece by Rossini either when the user presses a button at 10 o'clock, or at a certain time which can be pre-set using the alarm function.

ROSSINI

As Breguet maintains its old archives in such good order, it is possible to find intriguing information there, such as the fact that composer Gioachino Rossini himself owned a Breguet watch, more

particularly watch number 4604 with a golden case, a model which in addition to the time also showed the date. The watch was originally ordered by a banker by the name of Schickler in 1828 and cost FRF 3,600 at the time. Breguet is aware that in 1843 the same watch was handed in for servicing by Rossini – who had perhaps received it as a gift – and that after his death in 1868, his widow continued to wear the watch and also had it serviced by Breguet on a number of occasions.

LE RÉVEIL MUSICAL

The first examples of the Le Music Réveil are now ready to leave Breguet to reach their expectant customers. All watches are individually numbered and manufactured from 18 carat white or yellow gold. The case is beautifully engraved with notes. The automatic movement calibre 0900, has a 55-hours power reserve.

To maximise the pleasure that new owners can derive from their watch, the box also includes a wooden arm made from a special type of wood, a type of spruce with exceptional resonance properties which is often used to make violins. For the best possible sound quality, the watch should be placed on this wooden arm, which then acts as an amplifier. ■





The lost watch glory of FRANCE



+++++

With more than 62 million inhabitants France is an important market for watches, but by far the most watches that are sold each year come from Switzerland. For the Swiss watch industry France came in third place in 2010, after the United States but before China (which has now overtaken France), with an export value of 1.16 million Swiss francs. France used to have its own flourishing industry, but very little is left of it. In a series of two articles Jan C. Hubert describes the rise and fall of the French watch industry. This is part two.

Despite the top position occupied by Paris, the French watch industry had already suffered a setback with major consequences by the end of the 17th century. This happened in 1685 and was caused by the abolition of the 1598 Decree of Nantes, which caused many Protestant watchmakers to flee the country, especially to Switzerland and England. As a result France had to start importing watches. Geneva, which was just across the border, benefited tremendously and became an important supplier, also because the city established an almost industrial serial-based production. The fact that suppliers from the French border region played a role in this production hardly benefited the French industry at all. French watchmakers, including Breguet, even started using movements from Switzerland as the basis for their products.

>>



THE MUSÉE D'ORSAY IN PARIS



OLD RAILWAY CLOCK IN GARE D'ORSAY, PARIS

Despite this development enough knowledge was left in France for a new growth period, and not just in Paris: in the French area bordering the north-western part of Switzerland, with Besançon as its centre, an industry of – mostly – watch component suppliers emerged.

FRÉDÉRIC JAPY

An important role at that time was played by Frédéric Japy. He was born in 1749 in Beaucourt (France), where his father was the mayor. This town is close to where a corner of Switzerland (where Porrentruy is situated) intrudes into France, east of Besançon. Japy learned the watch trade in Le Locle and returned to his birthplace at age 24, where he started a production company.

In the era of Japy the individual watch components were made by many independent (often home-based) workers and were then purchased by companies that used them to assemble their watches.

Japy broke with this tradition

and brought the specialists together in a factory, each with their own, often individually designed machines. The result was a much reduced flow of people and components, less manual labour, consistent quality, in short: industrial production. This was given another boost when, in 1793, Japy was able to purchase a water mill from the French state to drive his machinery. Japy's company ultimately produced 40,000 watches per year. His son went even further: he moved to Montbéliard where, in 1813, he was able to produce an astonishing 300,000 movements (still for pocket watches). However, all this was once again achieved with Swiss machinery and the movements were sold mainly to renowned Swiss buyers. Around 1870 Japy's annual production was half a million (and in Besançon a further 300,000 movements were produced).

As a result of problems with the succession the Japy family sold the business to French company Jaz. When the Quartz Crisis broke out Jaz attempted to turn the tide by combining Japy and

other at-risk French watch companies together in a conglomerate that came under the management of French industrial giant Matra. When Matra ultimately sold the watch group to a Japanese company this signalled the end of Japy c.s. The brand was subsequently bought by Chaumet.

LAURENT MÉGEVAND

A number of important watchmakers, like Perron, Perrot and Paliard, worked in Besançon itself. The serious growth of this town started in 1793 when Laurent Mégevand (1754-1814), who originated from Geneva, was given a grant for a movement factory, on the condition that he would hire 200 students per year. Mégevand started with 80 employees who, like himself, came from Switzerland and became persona non grata there because – like Mégevand – they supported the French Revolution.

A mere two years later thousands of watchmakers had moved to the town, attracted by a range of privileges. Mégevand set up a kind of conveyor belt system whereby each individual only had to perform a few actions. However, financially the factory was a disaster and just five years later, in 1798, the company was bankrupt. Mégevand, who was married to Marianne Breguet (that's right, a distant relative of the Breguet) stayed in Besançon and died in poverty in 1814 during the occupation of the city by French monarchists. His memory lives on in Besançon, where an important thoroughfare is named after him.

Partly thanks to Mégevand the watch industry had taken root in Besançon and the surrounding area. That situation did not change when the Swiss returned to their home country after their privileges in France had been revoked. In 1825 80,000 movements were being produced, nearly all destined for Swiss customers; in 1850 the production was 150,000 movements. Just how important Besançon continued to be as a watch town is evident from the fact that in 1880 the town was responsible for 90% of the total French watch production.



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EMMANUEL LIPMANN

The fact that the death of Mégevand and the departure of the Swiss did not mean the end of Besançon as a watch town can to some extent be credited to Emmanuel Isaac Lipmann, who had started a watch business in the town at the start of the 19th century. Around 1865 a grandson of Emmanuel, Ernest Lipmann, had a small watch company employing 15 staff in the Grand Rue in Besançon, which would grow into the biggest watch company in French history. In 1896 the company deleted the "mann" from its name and the brand was henceforth known as "Lip". Lip became a Société Anonyme or S.A. (Limited Liability Company) in 1931 and had around 350 employees at that time.

Immediately after the Second World War there was one more big revival, when necessity forced the French production system to be totally updated. In 1960 Lip had more than 1,000 employees, but the revival was short-lived. Tax measures, protection and union demands rapidly weakened the French watch industry and the Quartz Crisis nearly signalled the death knell. At Lip the decline was particularly spectacular, despite a participation of Swiss company Ebauches SA, which increased to the permitted maximum of 43%. After strikes and other labour problems the company was occupied and taken over by its employees. On 14 August 1973 the factory was forcefully seized back by riot police. Incidentally, the brand still exists today, a mere shadow of its former great self.

Generally speaking, the same applies to many French watch companies. The industrial production that had started in the United States was adopted by the Swiss, but to a much lesser extent by the French. After the huge economic crisis of the 1930s the Swiss manufacturers were stronger than ever before and the French producers were no longer even strong enough to beat the Germans when it came to clocks and alarm clocks.

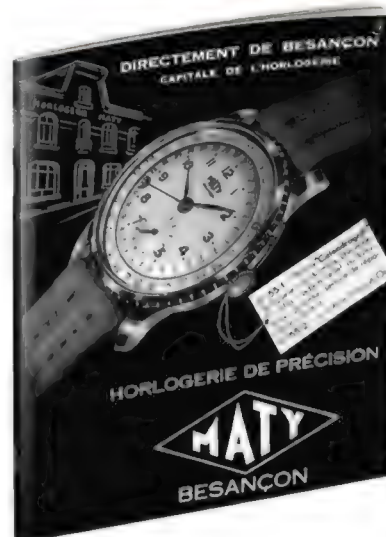


OTHER BRANDS

Other well-known but much younger brands from Besançon are Yema and Maty. Yema was founded by Henry Louis Belmont in 1948. In 1952 the brand introduced a complete French automatic chronograph and in the 1960s Yema was the most-exported French watch brand. In 1969 the company produced half a million watches that were sold in more than 50 countries. Despite the Quartz Crisis the company reached its peak in 1978, with 1.3 million watches. After this Yema collapsed and by 2005 the production was down to fewer than 50,000 watches. Once again the brand still exists in Besançon, as the "Maison Horlogère Française".

Maty was founded in 1952. In that year Gérard Manton, then aged 24, started a watch mail order company under that name and was very successful. The Maty brand still exists and still supplies watches, but it now focuses mainly on jewellery.

Another big watch company in Besançon was Kelton-Timex, which opened its factory in 1966. Kelton was intended to be a cheap brand in the American Timex group, with a pin lever



escapement, a technology that had been comprehensively used by Roskopf a century earlier. This factory, which also produced under the name of FRALSEN for some time, did not survive.



GERARD MANTON

ALAIN SILBERSTEIN

Needless to say, in France, as in Finland, the Netherlands or Hong Kong, there are Master watchmakers who produce watches, either unique one-offs or in small editions. These artisans are not relevant to the watch industry but watch aficionados love these exclusive and special products. One such watchmaker is Alain Silberstein. He was born in Paris in 1950, where his father had a clothing store. He studied interior architecture and design at the prestigious École Nationale Supérieure des Arts Appliquées et des Métiers d'Art, which were also the fields in which he worked after his studies. This is probably also the reason why, unlike his fellow countryman François-Paul Journe, who had been trained as a watchmaker, he did not move to the watch country of Switzerland. He did move to Besançon for his work, and when his Lip watch broke down

while he was living there he decided to design his own watch. In 1987 he presented his first models in Basel; they stood out because of their Bauhaus-inspired design and their colourful and cheerful hands. When orders started to flood in Silberstein established La Fabrique De Besançon S.A. in Besançon, which further emphasised his ties to the Lip watch that had been produced in Besançon in the distant past. Another French Master watchmaker is Jean Dunand, whose Palace Coup model is a GMT chronograph with tourbillon; the square case was inspired by the Eiffel Tower. Also contributing to the exclusivity of the watch is its price tag: 460,000 dollars.

BESANÇON TODAY

Besançon is still closely associated with the watch world. An École Nationale d'Horlogerie was established in the town, as well as a Musée

ALAIN SILBERSTEIN WATCH



du Temps, and the city's observatory was involved in chronometry competitions, and will be again in the near future. Even today Besançon and the surrounding area depend strongly on the watch and movement industry. There are still quite a number of movement production studios as well as goldsmiths, engravers and enamellers who work for (mostly Swiss) customers. However, from an economic point of view it is much more important that many French people from the border region work for Swiss watch companies.

FURTHERMORE

In the same way that some watch brands diversify into writing goods, leather goods, perfumes and other luxury items, fashion brands are diversifying into watches, often with surprising results. For example, fashion and perfume house Chanel found its own use



JEAN DUNAND PALACE COUP



FLOWER WATCH IN BESANÇON



MUSÉE DU TEMPS, BESANÇON



ASTRONOMICAL CLOCK AT MUSÉE DU TEMPS

for ceramic, a rock-hard material to which, for a long time, Rado appeared to have the exclusive right: the Chanel watches that feature cases of white ceramic material in particular, are very special and pure Chanel. Then there are Hermès watches, quite a different product from the equestrian equipment and scarves that made this house. Louis Vuitton, which started out making bags and suitcases, managed to stand out with its Tambour models. Then there are famous jewellers like Boucheron and Chaumet, who sell watches in addition to their jewellery. For example, as early as 1911 Chaumet produced a watch featuring a Breguet movement, and the company still works together with movement manufacturers.

A CASE APART

Quite a different story is that of Cartier. Louis Cartier, mainly a designer of jewellery, produced a watch for his Brazilian friend Alberto Santos-Dumont at the start of the 20th century (this is said to have been in 1904 or 1906). This was a wrist watch – highly unusual for those days – because as an aviation pioneer Santos-Dumont needed his hands (and feet) to pilot his plane and was therefore unable to consult a pocket watch. The movement of this special watch was produced by Edmond Jaeger, the French Master watchmaker who later would be producing products exclusively for Cartier and subsequently merged with the Swiss LeCoultre family. Watches (and clocks) were therefore nothing new to Cartier, who followed the Santos with the Baignoire (1912), the Tortue (1912) and the Tank (1919), all with movements from the best – mainly Swiss – manufacturers. After the Second World War the brand lost its way for a while, but at the start of the 1970s a new management (which would eventually become the Groupe Richemont) infused the brand with a new spirit. Until 1972 Cartier assembled its watches in France, using calibres

from top Swiss producers, but in that year the watch department of the company was moved to La Chaux-de-Fonds and grew into a true watch division. These days, thanks to having taken over the Roger Dubuis manufacture, Cartier produces its own proprietary movements of the very highest level. Cartier's choice of Switzerland is not a coincidence: the French top brands in the luxury market do not produce in France because like no other they are aware of the importance of good marketing and therefore of the value of the "Swiss made" label.

AND FINALLY

Unlike the German watch industry, which revived completely after the German unity, it is unlikely that the French watch industry will ever get back to its old level, despite a past with many more high points and top watchmakers. What remains is a glorious past. One small light in the darkness is Peignenet, based in Morteau, which is busy turning into a classic manufacture thanks to the passion of the Leibundgut family, and which proudly bears the once meaningful "Fabriqué en France" stamp. It is the best possible tribute to a glorious past. ■



PEIGNENET RUE ROYALE

PEIGNENET MOOREA ROYAL TRIUMPHÉ



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JAEGER-LECOULTRE RACES AWAY WITH ASTON MARTIN

Of the numerous collaborations between watch brands and car manufacturers, the link-up between Jaeger-LeCoultre and Aston Martin has produced one of the more interesting collections of watches.

AMVOX5 WORLD CHRONOGRAPH LMP1





brand more commonly associated with conservative, traditionalist pieces, the partnership between Jaeger-LeCoultre and Aston Martin in fact has considerable history. It dates back to the days when watch companies, as specialists in precision instruments and dial displays, frequently had side businesses supplying dashboard instruments to the car industry. In the 1921 Jacques-David LeCoultre and Edmond Jaeger founded a workshop in London to do just that, which quickly became a market leader, particularly in the field of racing cars. Within a few years, so the story goes, cars equipped with Jaeger counters, including Aston Martins, were winning around 95% of car races.

AMVOX5 WORLD CHRONOGRAPH LMP1

The partnership was officially rekindled in 2004. The latest release is the Amvox5 World Chronograph LMP1 – the title is a reference to Aston Martin's LMP1 line of GT racing cars, which compete in events like the Le Mans 24 Hour competition. As well as a chronograph, the watch adds a world time function to the mix and a rather zippy colour combination of blue subdials and world time display, a grey dial with a grid pattern inspired by Aston Martin air vent grills, and stand-out orange chronograph hands. The watch, with a Jaeger-LeCoultre Calibre 752 movement, is housed in a high-tech ceramic case composed of a mixture of zirconium and yttrium that's tested to extreme pressures and temperatures to ensure it can stand up to the intense forces experienced in a speeding GT race car. Production of the watch is to be limited to just 250 editions. ■

Launched seven years ago, the Amvox range – of which the latest release is the Amvox5 World Chronograph LMP1 – is recognisable for a design aesthetic that is distinctively modern, quite architectural, but retains the classicism you'd expect a historic carmaker like Aston Martin to inspire.

HISTORIC PARTNERSHIP

It's also had its share of technical ingenuity. Consider, for instance, the Amvox2 Chronograph, which replaced the traditional chronograph push-pieces with a "vertical trigger" system to operate the stopwatch more easily when driving; or the Amvox2 Transponder that, as its name suggests, incorporates a miniaturised transponder system – circuit, wiring, antenna and all – into the watch itself. While the watches are among the most contemporary-looking designs from a watch





VACHERON CONSTANTIN
PATRIMONY HARRODS EDITION

WATCH HEAVEN IN HARRODS

The way watch companies sell their goods is shifting, with more and more opening dedicated, single-brand boutiques. On page 52 Hublot's Jean-Claude Biver explains why, while Lynn Schroeder of Bond Street's Wempe boutique makes the case for variety on page 48.



Harrods is covering both bases in its brand new Fine Watch room, a rather splendidly masculine space (think black marble, hanging from the ceiling with patterns made of individual watch parts) which it opened in November. According to Harrods, it's home to Europe's largest watch collection.

THE BEST OF THE BEST

As well as centrally selling a huge number of high-end brands, including Corum, Blancpain, Ulysse Nardin, Girard-Perregaux, A. Lange & Söhne and Montblanc – plus new arrivals Bremont, John Isaac and Philip Stein and a host of others – the room is fringed with 12 single-brand boutiques for some of the most prestigious names in the game. These include the UK's first stand-alone boutiques for Vacheron Constantin, IWC, Richard Mille and Panerai. Sitting alongside them will be fellow big hitters Rolex, Breguet, Audemars Piguet, Jaeger-LeCoultre, Hublot, Omega and Chanel.

SPECIAL EDITIONS

There are also some very special watches being produced exclusively for Harrods to mark the launch. For the most devoted customers, Vacheron Constantin has adapted a Patrimony watch to feature an engraving of the Harrods building on the reverse – ten pieces are available. Corum has created a new automatic golden bridge in rose gold, while IWC is celebrating with a Portuguese automatic in red gold with a 7-day power reserve and a unique dial. Breguet collectors should look out for a version of its Queen of Naples women's

watch on a ruby-set bracelet – a world exclusive – while Blancpain will launch its see-through L-Evolution Carrousel Sapphire in tantalum. Harrods is overhauling its wider offering on jewellery and watches, which will also see the former watch room being converted into a dedicated Fine Jewellery room, including jewellery watches from the likes of Piaget, Backes & Strauss and Tiffany & Co. Expect the doors to open on that in the next few months.

OMEGA GOES EAST

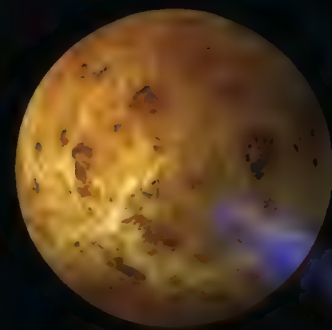
Meanwhile, the largest Omega boutique in Europe, and one of the biggest in the world, has opened in Westfield Stratford, the new shopping complex that's part of the Olympic development in East London. Omega is the official timekeeper of the Olympics and has brought out a couple of stunning Seamaster editions to celebrate next year's London games. The new boutique can be found near the gateway for the Olympic Park and covers two floors and 790sqm. Watches, jewellery, perfume and the new leather collection are all on offer, while there's also a glass-fronted repair workshop on site and an Omega exhibition space. It's Omega's eight UK store.



ASTRONOMICAL COMPLICATIONS

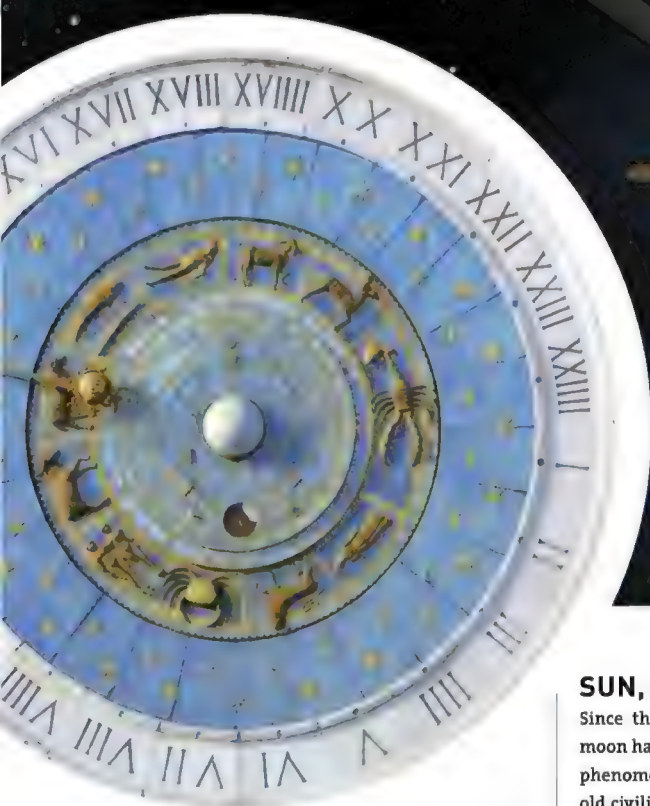
THE UNIVERSE AROUND THE WRIST

Watches with astronomical complications are among the most complex mechanical creations. They form a separate, special category with its very own fan club. The simplest complication is the moon phase indication. But those who want to, can wear a much bigger piece of the universe around their wrists.





IWC PORTUGUESE SIDÉRALE SCAFUSIA



TOWER CLOCK WITH MOON PHASE, MONTH AND THE POSITION OF THE PLANETS AGAINST THE ZODIAC, FROM PADUA, ITALY

The very first requirement of a movement in a clock or watch is telling the time. In the early days church clocks would indicate the hours only, which was enough at that time. Later, minutes were added and later again, seconds, and today that is still all we need. Clock and watchmakers quickly got bored with this and started looking for new challenges. They soon found some, and one complication after the next found its way into movements, initially in church clocks and house clocks, then in pocket watches and finally in wrist watches.

TWELVE KINDS

Famous complications that are more than worthy of that term are the tourbillon and the minute repetition. But other complications are now so common that it is easy to forget they are complications at all, such as automatic winding or the various versions of the chronograph. A separate group on the list is formed by the astronomical complications, of which the Fondation de la Haute Horlogerie distinguishes at least 12. This story is about those complications but for background information let's start with an introduction to the history of astronomy.



SUN, EARTH AND MOON

Since the dawn of mankind the sun and the moon have been dominant but little-understood phenomena. They were intensively studied by old civilisations, also because of their presumed godliness, and solar and lunar eclipses were considered divine omens, mostly of imminent disasters. Today we know that the Earth revolves around the sun and the moon around the Earth. The moon itself does not emit light. The phases of the moon are caused because the surface of the moon that is lit by the sun can be seen from the Earth. If the whole surface is visible we have a full moon. Sometimes nothing is visible at all (when the moon is almost directly between the sun and the Earth: new moon) and sometimes we can see part of it (the first and last quarter).

A solar eclipse is caused when the moon is (virtually) exactly between the Earth and the sun, and in a lunar eclipse the Earth is between the sun and the moon, preventing any sunlight from reaching the moon. Other predictors of disaster were sporadic phenomena such as meteors and comets. Thanks to their relatively simple cycles it was fairly easy to chart the positions of the sun and the moon.

STARS

Clear lights were dominated by a bright, starry sky, because there was no light pollution and the Milky Way was clearly visible as a bright band of stars. This phenomenon, too, was studied by old civilisations. Only in modern times did it become clear that the Milky Way is nothing more than part of the enormous solar system to which our sun also belongs.

People started to interpret groups of stars that were close to each other in the firmament (but that in reality rarely had anything to do with each other) as constellations and gave them names like Big Bear, Orion, Cassiopeia, Libra, etc. The constellations appeared to revolve around a single star. In about 2800 BC this was Thuban, the brightest star of the Dragon constellation. These days it is the Pole Star, the brightest star in the Little Bear constellation. Some constellations rise in the east and set in the West whereas others revolve so closely around the Pole Star that they remain visible all night.

Because the Pole Star is not directly above us some of the constellations are only visible for part of the year. This doesn't mean they are not there, simply that they are in the firmament during the day and therefore invisible in the daylight. Our location on Earth also determines what we see of the firmament: in the southern hemisphere it looks quite different from what we see. Other than that, the constellations do not change in a human lifetime.

PLANETS

Amidst the stable picture of constellations there were some individual stars for which the relatively simple calculations did not work. Only much later did it become evident that these "wandering stars" are the planets which, like the Earth, revolve around the sun. Planets themselves do not emit light but reflect the light from the sun. The brightest were the Morning and Evening Star, of which it was discovered only much later that they are one and the same planet: Venus. Venus was described by the



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Babylonians as early as 1600 BC but was undoubtedly known long before that, because the weaker "star" Mercury was mentioned by these same Babylonians as early as 3000 BC. Mars (the red planet), Jupiter and Saturn were also recognised in Ancient times. All these planets are visible with the naked eye.

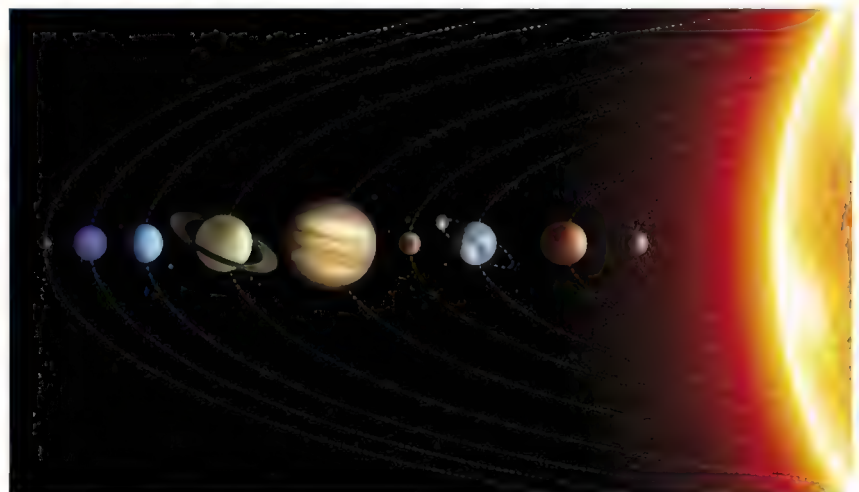
Weaker planets were observed thanks to the development of the telescope: Uranus in 1781, Neptune in 1846 and Pluto in 1930. However, in 2006 Pluto was downgraded to a dwarf planet, of which more were found, even further away than Pluto. The distance from the sun, in descending order, is: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.

HELIOCENTRIC MODEL

Thanks to the old Greeks like Plato, Aristotle and Ptolemaeus we knew how all of these celestial bodies moved in relation to each other: the Earth was the centre of the universe and the other celestial bodies revolved around the Earth, the geocentric model. The Roman Catholic Church elevated this standpoint to a dogma, which made it hazardous to suggest a different model, as Galileo discovered to his detriment. However, the truth could not remain suppressed forever and the heliocentric model – which is mostly associated with the names of Copernicus (1473-1543) and Johannes Kepler (1571-1630) – eventually became universally accepted: the planets, and therefore the Earth as well, revolve around the sun. The trajectory of the Earth (and of the other planets) is not perfectly circular, but the deviation is minor. The movements of the celestial bodies are described by elementary laws of physics and can be duplicated with the aid of cog wheels.

COMPLEX

The trajectories of all the planets are roughly in the same sphere because the planets were all formed from a flat "disc" of matter that revolves around the sun. This disc is also referred to as the ecliptic plane or "the ecliptic". The Earth's rotational axis is inclined at an angle of 23.5° to this plane as is, therefore, the plane through the



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PLANETARIUM THAT SHOWS THE POSITION OF THE PLANETS DURING DIFFERENT SEASONS



Earth's equator. The Earth's relation to the ecliptic is like that of a spinning top that isn't standing straight and – like this spinning top – gravity is making it wobble; the Earth's rotational axis slowly traces out a cone shape under the influence of the sun's gravitational pull. This phenomenon is called “precession”.

This precession affects two ways of measuring the time. In the solar time that is generally used the duration of a day and night (by definition 24 hours) is determined by the time between the 2 subsequent points when the sun is at its zenith. In sidereal time (“star time”) 24 hours are measured by the time that lapses between two consecutive passages of the same star along a fixed meridian. Because of the precession, a sidereal day is not exactly identical to a solar day and is 23.9344696 hours, or 23 hours 56 minutes and 4.1 seconds.

The dates on which winter turns to summer and summer turns to winter are called the “equinoxes”. These twice-yearly events are also the time when the Earth's axis does not point to the sun or away from the sun. At these times the days and nights are equal in length.

The precession of the Earth's rotational axis also shifts the equinoxes over a period of around 20,000 years. A problem that the makers of astronomical watches do not really have to worry about.

Along the ecliptic you can picture the Zodiac, consisting of the 12 star signs that are known more because of horoscopes than for their astronomical significance.

IT ALL STARTED IN ANCIENT TIMES

The history of movements starts with movements for church clocks, and even for those, astronomical complications were first incorporated a long time ago. With respect to the astronomical complications only the solar system and our own Milky Way system with the familiar constellations are relevant; we don't have to worry about all the other solar systems with their infinite number of stars.

Despite the fact that the Ancients had no idea what

was revolving around what, apparently Archimedes (287-212 BC) already had a mechanical instrument, with cog wheels and a pendulum (so not driven by a weight or spring) that could predict the positions of the sun, the moon and the planets that were known at that time. This type of instrument, which is referred to as the Antikythera mechanism after the place it was found, was discovered in a shipwreck in the Mediterranean in 1902 and has been dated at 150-100 BC. However, the science behind this instrument sank into oblivion before the fall of the Roman Empire.



NAVIGATION INSTRUMENT





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OUTSIDE EUROPE

Quite separate from these and later developments in Europe, in 11th-century China Su Song built an astronomical clock that was powered by water (or maybe mercury) by means of a paddle wheel. The whole structure was tucked inside a clock tower that was at least 10m high. Thanks to surviving descriptions and drawings it has been possible for a number of copies of this clock to be made. The most accurate was the Al-Jazari Castle Clock, which was also powered by water. This clock had a range of astronomical complications, including moon phases and the trajectories of the sun and moon.

EUROPE

From around 1300-1330 mechanical clocks were being built in Europe that were not powered by water but by weights, and that had escapements. Around 1330 Richard of Wallingford in St. Albans (England) built a clock that was unfortunately lost but, according to descriptions, displayed astronomical data. The best described planetarium clock (also referred to as "astrarium") from this period, which had no fewer than 107 cog wheels, was built in Italy by Giovanni de'Dondi (1318-1389). Prior to this his father Jacopo had already made a name for himself in Padua in 1344 with a public astronomical clock in the Piazza dei Signori, one of the first clocks of its type. Legend also has it that de'Dondi finished his astrarium in 1364 (or maybe 1380), after 16 years of working on it. Needless to say the mechanisms used in those days were based on the geocentric model. When the original of the de'Dondi was lost, perhaps when Mantua was plundered in 1630, it had already stopped working a long time previously as a result of the many repairs. Fortunately the working drawings of the de'Dondi were

CASE-BACK OF THE IWC PORTUGUESE SIDÉRALE SCAFUSIA



preserved. This enabled Luigi Pippa to build a number of copies of the clock, one of which, a copy from 1985, can be admired in the Musée International de l'Horlogerie (MIH) in La Chaux-de-Fonds.

Although the calculations of the clock builders were accurate enough, the clocks themselves most definitely weren't. This is mostly because the metalworking methods of those times could not deliver the required quality. Many of these early movements also had to be repaired frequently, which was not always done in the most expert way.

THE CHURCHES FOLLOW

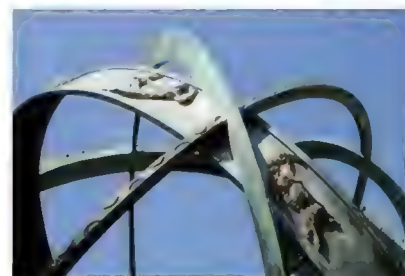
Far back in history churches already had clocks, because it was considered very important that the various church services were held at the right times. Whereas the first clocks only had a single hand for the hours, a minutes hand was soon to follow. The movements were subsequently expanded with a range of complications, including astronomical ones. The Cathedral of Strasbourg got its first astronomical clock in 1352-1354, but it stopped working at the start of the 16th century. A second clock was built around 1570 and managed to keep going until 1788 (or 1789). The case of this second clock was used for the third clock, which was built around 1840. This clock had numerous astronomical complications as well as various moving figures (so-called "automatons"). The Czech Republic is home to various ancient astronomical clocks. The centre section of the clock in the old town hall in Prague dates back to

1410. Olomouc, the former capital of Moravia, has a very special heliocentric astronomical clock in its main square that dates back to 1420 but has been modified regularly throughout the centuries. In addition to a number of moving figures, the clock features two dials above each other, with the bottom one displaying the time, the calendar and the phases of the moon. The top dial displays a star chart with the sun, the Earth and the moon against a background of the signs of the Zodiac.

The Cathedral in Lund in Sweden also had an astronomical clock by the end of the 14th century which, after having been in storage for more than 80 years, was restored to its former glory in 1923.

MORE MODERN CLOCKS

In the subsequent centuries astronomical clocks were installed in many churches, and a lot of them can still be admired today. A recent footnote with respect to the Scandinavian clocks are the clocks designed and built by Rasmus Sørnes (1893-1967), a Norwegian clockmaker. His last one is perhaps the most complicated clock ever made, with sunrise and sunset, solar and



lunar eclipses, moon phases and tides, the position of the sun and the moon in the Zodiac, the Julian and Gregorian calendar, sidereal time and GMT, a complete planetarium (still including Pluto) and much more. Oh, and you can see the local summer and winter time on it as well. And all that in a case measuring 210 x 60 x 70cm! And finally, this overview would not be complete without the wonder from the Netherlands, the planetarium of Eise Eisinga in the little town Franeker, the oldest functioning planetarium in the world. Eisinga, a wool carder, built the planetarium in 1774-1781 using 10,000 hand-forged nails as cogs. Today, Mercury, Venus, the Earth, Jupiter and Saturn still revolve around the sun at the correct times. The whole thing is powered by a pendulum clock and nine weights.

POCKET AND WRIST WATCHES

An astronomical clock is a clock which, in addition to the time of day, gives astronomical information. This may be the position of the sun or moon, the moon phase, the sign of the Zodiac, the sidereal time or even a revolving star chart. An interesting detail is the fact that astronomical clocks normally use the geocentric model, often with the Earth in the centre of the dial.

In astronomical clocks the hour hand often has a little sun that indicates the time on a 24-hour scale. The year is usually depicted by the 12 signs of the Zodiac as a concentric circle within the 24-hour scale, or on a smaller, separate circle, the projection of the ecliptic plane. The ecliptic dial is the projection of the ecliptic plane, shown off-centre on the dial and appears to be distorted, as a result of the angled position of the Earth's rotational axis compared to the ecliptic plane. The ecliptic dial makes one revolution every 23 hours, 56 minutes and



PATEK PHILIPPE CALIBRE 1989

4.1 seconds (in other words, one sidereal day). The complications used in astronomical clocks form the basis for smaller astronomical movements, initially in clocks, then in pocket watches and finally in wrist watches.

The advantage of a church clock is that a clockmaker is not really restricted by the available space. For a table clock that is quite different. These kinds of clocks were a sign of affluence in higher circles and it allowed clockmakers to show what they were capable of. In Augsburg (Germany), for example, clockmakers had to build an astronomical table clock if they wanted to get the title of Master Clockmaker.

It was a logical progression that movement makers would try to reduce astronomical

complications to such an extent that they would fit inside a watch case. A tourbillon may be complicated, but many astronomical complications could only be made by the very best watchmakers and brands. Because of their size, pocket watches were most suitable; the more sizeable the better.

PATEK PHILIPPE

It is not surprising that Patek Philippe, the absolute top watch brand, is also renowned for its astronomical watches. A spectacular example is the so-called Graves Watch, a rather big pocket watch that Patek Philippe made and delivered in 1933 by order of Henri Graves Jr., an American banker. The watch weighs 540g and its case with





PATEK PHILIPPE GRAVES WATCH

a diameter of nearly 9cm and a height of nearly 2.5cm houses 24 complications. The reverse of the watch also has a dial which shows the sunrise and sunset, the sidereal time and the actual firmament above New York. The Graves Watch was auctioned by Sotheby's in New York in 1999 for not a cent less than 11,003,500 dollars. A much later Patek Philippe highpoint is the Calibre 1989 from, you guessed it, 1989. This pocket watch has an amazing 33 complications and the information is shown on 2 main and 12 subsidiary dials with 24 hands. This watch features a star chart made of sapphire crystal which depicts the Milky Way and 2,800 stars of the northern hemisphere in five clarity classes. Patek Philippe continues to release astronomical complications with some regularity. The Star Calibre 2000 (from 2000) is a pocket watch in a limited edition of 20. In addition to every possible time and date indicator and a sonnerie, the hand-wound movement also features a chart of the firmament and indicates when Sirius and the moon pass a certain meridian. Reference 5002 is a Patek Philippe wrist watch, the Sky Moon Tourbillon. In addition to a tourbillon and minute repetition the watch has a number of other complications, of which the most interesting astronomical ones are hidden at the back. Here you can see the sidereal time, the moon phase, the trajectory of the moon and the current star chart.

ULYSSE NARDIN

Ulysse Nardin is a story in its own right. The brand, which was established in Le Locle in 1846, had made its reputation mainly with ship's chronometers and had been all but wiped out by

the more accurate quartz movements when Rolf Schnyder bought the sad remnants of the company. He visited watch businesses to gauge the interest in a revitalised Ulysse Nardin and during one of his visits he saw an astronomical clock that was being restored by a trainee watchmaker. Schnyder asked whether such complications could be built into a wrist watch, which the trainee considered an interesting challenge. The trainee was none other than Dr Ludwig Oechslin, a physicist and astronomer, who built clocks as a hobby. Obviously Schnyder had put his question to the best possible man for the job. The first result of the collaboration between these two inspired men was the Astrolabium Galileo Galilei, which went into production in 1985. The astronomical complications of the watch, in addition to the moon phase, are the Zodiac, the length of the day, dusk and night and the positions of the sun

ULYSSE NARDIN
PLANETARIUM
COPERNICUS



ULYSSE NARDIN
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and moon. This masterpiece is the first one in the "Trilogy or Time", to be followed by the Planetarium Copernicus (1988) and the Tellurium Johannes Kepler (1992). The Planetarium shows the positions of Mercury, Venus, the Earth, Mars, Jupiter and Saturn, while the dial of the Tellurium depicts the Earth seen from the North Pole. Ulysse Nardin is still making very interesting watches and is a pioneer in the area of new materials, but the active collaboration with Ludwig Oechslin ceased in 2001.

CHRISTIAAN VAN DER KLAAUW

Christiaan van der Klaauw is an exceptional clock and watchmaker. He trained at the renowned instrument builders' school in Leiden (the Netherlands), where he also completed a traineeship at the observatory where Christiaan Huygens worked in the past. He started with wall clocks and progressed to table clocks and finally watches, often already with astronomical complications. It is therefore with good reason that his small company, which he started in 1974, is called "Christiaan van der Klaauw Astronomical Watches". The current collection has a number of special watches.

"Astronomical Masterpieces" are the Astrolabium, the Planetarium, the Venus, the Real Moon 1980 and the Eclips. The Astrolabium is the top model, named after an instrument that was described more than 2,000 years ago and has been refined since then, which can be used to determine the time by the sun or stars. One version reflects what the firmament looks like in a certain location at a certain time. The Van der Klaauw watch shows solar and lunar eclipses and, among other things, the position of the sun and the moon in the ecliptic. The Planetarium shows the revolutions of Mercury, Venus, the Earth, Mars, Jupiter and Saturn, and the similarities to the planetarium of Eisinga, whom Van der Klaauw admires greatly, are not a coincidence. The beautiful Venus shows the position of the sun with a red hand on the Zodiac, but also the positions of the Earth, the moon and – of course – Venus. The Real Moon 1980 (1980 being the year in which Van der



CK REAL
MOON 1980



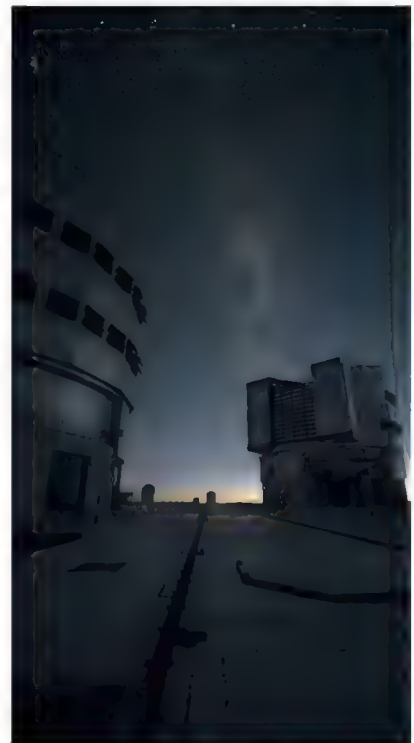
CK ASTROLABIUM



CK RETRO MOON



CASE-BACK OF THE CK RETRO MOON



IWC PORTUGUESE SIDÉRALE SCAFUSIA



Klaauw presented a special astronomical clock) shows the moon phase at 6 o'clock and at 12 o'clock a vertically moving sun shows how high the sun is above the horizon; an eclipse hand at 3 o'clock shows if there is a solar or lunar eclipse anywhere on Earth. A window at 12 o'clock shows the revolutions of the sun and moon, while the aforementioned eclipse hand is at the 6 o'clock position.

A second collection is called "Collection of the Stars" and it includes a number of special astronomical watches. In the Retro Moon model a retrograde hand indicates the correct moon phase, and the Ceres 1974 has the more common moon phase indicator. The Orion has a star chart for the northern hemisphere that completely revolves once a day (and makes an extra revolution every year), while a window linked to the hour hand shows which part of the celestial sky is visible.

IWC SCHAFFHAUSEN

On 27 August this year IWC presented a special astronomical watch, the Portuguese Sidérale Scafusia. This presentation took place at the Paranal Observatory high in the Chilean Andes, part of ESO (European Southern Observatory), and for good reason: IWC's new flagship collector's item is its most complex ever creation – and arguably its most beautiful too. A charismatic melding of precision engineering and an almost whimsical sense of wonder at the mysteries of the cosmos, it took ten years for IWC to produce.

One might assume that development time was spent devising the dazzling star chart on the back; in fact, it is the "constant force" tourbillon mechanism, visible through a large window at the 9 o'clock mark, that is the watch's true technical achievement. As the tension in a watch's mainspring slackens, the change in

amplitude is liable to cause minor deviations in accuracy. In this case, though, the tourbillon – which rotates in a titanium cage beneath a polished steel bridge, carrying a second hand round with it – ensures an even supply of power to the escapement. That's crucial to the small 24-hour dial at 12 o'clock, which tells sidereal time, or time as it exists in the cosmos, outside the irregularities of the Earth's orbit. On the simple, elegant Portuguese dial it is the one reference to the delights found when you turn the watch over.

The astronomical map that fills the case-back is personalised to co-ordinates supplied by the buyer. Look up to the heavens as you stand on those co-ordinates on a starry night and what passes through the chart's yellow horizon circle will match what's visible in the skies. Each chart contains between 500 and 1000 stars and constellations, and is designed by Professor Ben Moore, a Zurich University scientist who holds the post once occupied by Einstein.

Surrounding the chart, a perpetual calendar mechanism counts off the days of the year, while sunrise and sunset indicators are also set to the buyer's coordinates and alter with the seasons accordingly. The final, heart-stopping bit of magic, though, is the other way the watch marks the setting of the sun: the star chart's blue background suddenly melts into a dark gray, returning to blue come the dawn.

IWC is only taking ten orders a year for the watch, which then takes a full year to make. Little surprise, then, that it costs 750,000 Swiss francs, though buyers will at least have the honour of having it delivered to them by IWC's top executives.



HUBLOT ANTIKYTHERA



HUBLOT

Also Hublot presented on 19 October this year an astronomical watch: the Hublot Antikythera calibre 2033-CH01, based on the mechanism of Antikythera. The story goes like this: in 1900 a storm drove a party of sponge divers to the tiny Mediterranean island Antikythera, between mainland Greece and Crete. After the storm the divers dived for sponges and chanced on the wreck of a ship that went down about 2000 years before. With backing from the Greek government the divers recovered many ancient

Greek bronzes, glassware, pottery and jewellery. One unattractive item was a calcified lump with the size of a phone book. When, months later, it fell apart the remains of corroded bronze gearwheels and plates covered in scientific scales and Greek inscriptions came to light: the remains of a scientific instrument, since then known as the Antikythera mechanism. In 1905, the German philologist Albert Rehm was the first person who realised that the mechanism was an astronomical calculator. Fifty years later,



Derek John de Solla Price of the Institute of Advanced Studies in Princeton, United States, suggested that the mechanism was operated by turning a crank on its side and that pointers on dials, located on the front and back, displayed the results. Price first identified the remains of a dozen gears and in a later article described 27 gears in the main fragment, based on an x-ray investigation by Charalambos Karakalosx, a Greek radiologist.

RECENT RESEARCH

In 2000 astronomer Mike Edmunds, of Cardiff University in Wales, told Tony Freeth, an award-winning documentary maker who also holds a Ph.D. in mathematical logic, about the Antikythera mechanism. Edmunds and Freeth gathered an international collaboration, including historians, astronomers and imaging experts. A windfall was the discovery of more fragments in a basement storage of a Greek museum, so that the group could investigate 82 fragments instead of the original 20. The group succeeded in reconstructing how nearly all the surviving parts worked and what functions they performed. Freeth described this fascinating investigation in detail in *Scientific American*, December 2009.

HOW IT WORKS

The bronze gears of the Antikythera mechanism were housed in a wooden box measuring approximately 33 x 18cm, sealed with bronze front and back plates covered with dials. Its origin is possibly Syracuse, at that time an important Greek colony on Sicily, and it dates probably from around 87 BC. The mechanism is not a clock showing the time, but by turning the crank the user would choose a date on the Egyptian, 365-day calendar dial and then read the astronomical predictions for that time, such as the position and phases of the moon and the rising and setting of important stars. The Greeks used a number of astronomical cycles and several of them can be used instead of the Egyptian calendar, e.g. the Saros cycle (223 lunar



months covering 18 years) and the Exeligmos cycle (three Saros cycles), the Metonic cycle (19 years, equal to 235 lunar months) and the Callippic cycle (76 years or 940 lunar months).

HUBLOT ANTIKYTHERA

It will be no surprise that some watchmakers were intrigued. One of them was Matthias Buttet, current Director of Manufacturing and R&D at Hublot. The challenge was to construct a miniature recreation of the entire mechanism in a timepiece and the result, Hublot Antikythera calibre 2033-CH01, was recently presented by Hublot at the Musée des Arts et Métiers in Paris, the museum where an exhibition entitled "Antikythera, the enigmatic machine which arose from the depths of time" is held (this calibre will also be shown at BaselWorld 2012). The known indications of the Antikythera mechanism are reproduced on the front and on the back. The functions of the calibre (with manual winding) are: hours, minutes, and, via a flying tourbillon cage, seconds. The position of the sun is shown, as is the position of the moon in the Zodiac and the moon phase. The sign of the Zodiac is given, and dials show the Egyptian calendar and the calendar for the Panhellenic games. The different Greek astronomical cycles



are also present. For some of the functions Hublot had to develop noncircular telescopic hands. The amazing and beautiful Hublot's calibre, with 495 parts (69 jewels) and a frequency of 21,600 vph, measures 30.40 x 38mm, and is 14.14mm thick.

PANERAI

A more utilitarian take on ideas similar to those displayed in IWC's Siderale Scaffusia is Panerai's astronomical beauty, launched last year: the Luminor 1950 Equation of Time Tourbillon L'Astronome. Limited to just 50 pieces, it is the most complicated watch the brand has created, but still reflects the sturdy, no-nonsense pragmatism beloved of the Paneristi.

At first glance it is a very recognisable Luminor timepiece – the cut-out "sandwich" dial markings, the cushion-shaped case and the protected crown housing are all present and correct, along with small seconds and date indicators.

But there's more going on here – much more. Above the 6 o'clock mark, a digital counter marks the Equation of Time (the difference between solar time and "mean solar time", variable by around 15 minutes plus or minus), while markers either side of the dial indicate sunrise and sunset. That's adjustable to a city of the buyer's choice, as is the rotating star chart displayed through a porthole window on the back of the watch. Here we also see a power reserve indicator (up to 4 days), tourbillon escapement and the fitting legend "Tribute to Galileo Galilei".

With a three-barrel tourbillon movement executed entirely in-house it is as much a statement of technical capability by Panerai as it is a celebration of the cosmos.

AND FINALLY

As is the case for many other complications, one may wonder what the point is of having astronomical complications in watches. With an astronomical watch, a watch brand proves that its watchmakers have mastered the most difficult complications. But for the aficionado the most important thing is how incredibly clever these complications are and, equally important, how beautiful they often are. ■





CHRISTOPHER WARD'S VALUE PROPOSITION

00/24 WatchWorld meets the man reconciling affordability and high-class watchmaking with his eponymous brand.

Not long after Christopher Ward's company first started selling its watches in 2005, a page for discussing them appeared on a major internet watch forum. Since the English brand had apparently arrived out of nowhere selling mechanical watches at suspiciously low prices, the website's moderators concluded the page must have been a front to promote the business, and threw its founders off the site. In fact, genuine enthusiasts had discovered the brand and become intrigued by its aim, as Ward says, "to make the cheapest most expensive watches in the world." Instead these people set up their own web forum, one that now has over 3,000 members and 70,000 discussion threads (to ensure its independence, neither Ward nor any of his team has ever posted on it).

A STEP FORWARD

"From a design perspective and from a horological aspect, we're really spreading our wings and taking flight," Ward says, and it would be hard to disagree. The significant novelty is a snazzy Jumping Hour dress watch that is the first Christopher Ward piece to carry a modified movement. "It's an ETA 2824 with a module applied that allows the hour to jump," Ward says. "It's done differently to most jumping hours and enables the watch to conserve power and be more accurate."

PRICE LEVELS

Ward, now 51, came to the watch industry after a career as a textiles buyer and consultant, working with brands like Reebok, Disney and

Littlewoods. A working class Liverpoolian, he cites his mother for "always being on my shoulder telling me to look for good value in things." After selling his consultancy in 2004, he reckoned his instinct for value could feasibly be applied to watches. He formed a partnership with a couple of acquaintances, Mike France and Peter Ellis, who had made fortunes from selling the Early Learning Centre toyshop chain. The trio reasoned that selling mechanical watches directly to customers – initially through magazine adverts, but quickly migrating to internet sales – could prune much of the spending that inflates watch prices. "If you look at most of the mid-level boys in the Swiss industry, they're all fishing from the same pond as us," says Ward. "We're all using ETA 2824 movements and Valjoux 7750s. The movements are the same, and the rest of the components are a small percentage of the final price anyway, so we're in spitting distance of each other at the start point."

The difference comes in the overheads – with an office of just 12 and direct access to his customers, Ward can operate at far more competitive price levels. “We can make a watch for £100 and sell it for £300 and make a margin,” says Ward. “A Swiss brand makes the same kind of watch for £100, but has distributor and retailer costs, shops, brand ambassadors, marketing campaigns, all kinds of middlemen – suddenly that £100 has become £1,000.”

ETA, VALJOUX, SELITA, AND...

While a few years ago only 30 per cent of Ward's sales were mechanical these now account for 55 per cent and climbing, with around 200 watches available. This year he expects to sell around 20,000 pieces, at an average price of around £275. Solid, smartly masculine models like the C9 range and Rolex-inspired C60 Trident diving watches are the backbone of the collection.

Ward's is far from the only company applying this business model – Debaufre in America and Steinhart in Germany are among the comparable enterprises overseas.

Like them, Ward must navigate an increasingly complex landscape when it comes to movement supply. While ETA's workhorse 2824 and Valjoux 7750 calibres are the mainstays of the collection, Swatch Group's gradual restrictions on the ETA supply chain necessitate other long-term plans. Ward also uses Selita movements (the Selita SW200 is a direct alternative to ETA's 2824) but most interestingly, he's drawing up plans to create movements in partnership with some other producers. “There's no doubt that ETA are cutting back gradually, though we have a great relationship with them and Selita and they've said they'll

continue supplying us,” he says. “But any pragmatic brand needs a plan B, especially when you're growing at the pace we are. We may have an opportunity, with a small group of like-minded brands, to develop a limited suite of movements and industrialise those.”

WATCH THIS SPACE

For now, technological developments include the release of the first two COSC-certified Christopher Ward chronometers, and that Jumping Hour watch – a timepiece Ward believes encapsulates the company's value offer. “It's our first watch over the £1,000 mark – but from one of the big Swiss brands it would be a £10,000 watch,” he asserts. Next year will bring an interesting variation on a chronograph. “It will be the sort of thing another brand would put out at £15,000 but that we'll do under £2,000.”

If Ward cannot compete for heritage with the great Swiss marques, what he can draw on is the notion of Englishness. It's a card played with great subtlety – as with Bremont, there are no Union Flag designs or RAF roundels, thank goodness – but it's there nonetheless.

Rebranding has coincided with a swish, information-heavy redesign of the website, which remains the only way to purchase a Christopher Ward watch. Ward says two



mainstream brands have approached him about buying the business to acquire the internet platform ready made – the answer, of course, has been no. “I think we've got a march on pretty much everybody in this respect,” he says, admitting the timing has been spot on for his company. “Times are tight; people are looking for value more than ever. They don't want to shell out for extraneous stuff, but they still want high quality – that's what we do.” ■

www.christopherward.co.uk

“ People don't want to shell out for extraneous stuff; they still want high quality – that's what we do ”



WatchWorld
high-end brands, models, technology and design

HUBLOT AND THE ANTIKINETIC MECHANISM
Swiss watchmaker Hublot has re-born the mysterious Antikinetik mechanism into the Hublot Antikinetik Calibre 2022 (H911) which is recently presented by Hublot at the Musée des Arts et Métiers in Paris, the museum where an exhibition entitled "Antikinetik, the enigmatic machine which arose from the depths of time" is held.

Chopard Happy Mickey Collection
After London, Amsterdam was the second place in Europe where the official launch of the Chopard Happy Mickey Collection took place. A very unique collaboration between Walt Disney and Chopard.

New Rolex ambassador: Tiger Woods
Rolex is proud to announce that Tiger Woods is its ambassador of watch brands because they have very little to do with watchmaking. But we make an exception for him. This is our Tiger Woods.

Standard time no longer in Greenwich?
Some experts believe a conspiracy of the future when scientists recently advised to use a new standard based on an atomic clock based in Paris.

More news
Cristina Ferrel has left Descente.
Sofisticated watchmaker Louis Vuitton.
Descente has launched the Mousie Locomotives.
Hermès has launched a new watch collection: L'Écrit.
Fashionable watchmaker and designer Louis Vuitton.
Cristina Ferrel has left Descente.
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Fashionable watchmaker and designer Louis Vuitton.

Raymond Weil Jeanette
Swiss watch maker Raymond Weil has launched the Jeanette collection in quartz version with a 28 or 32mm diameter, with or without a diamond setting, in stainless steel or pure gold.

New CEO for Parmigiani
Parmigiani Fleurier has appointed Philippe de Kersa to the post of Chief Operating Officer (COO), with effect from October 1, 2011.

2011 Image
The watch industry has been very successful in 2011. The watch industry has been very successful in 2011. The watch industry has been very successful in 2011.

THE SWISS WATCH INDUSTRY: THE 2011-12
The Swiss watch industry has been very successful in 2011. The Swiss watch industry has been very successful in 2011. The Swiss watch industry has been very successful in 2011.

FROM ANALOGUE TO DIGITAL
The watch industry has been very successful in 2011. The watch industry has been very successful in 2011. The watch industry has been very successful in 2011.

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WATCH FAIR ON FACEBOOK

The world's first digital International Watch Fair on Facebook was held from 6-9 September. More than 100 participants, including Edox and Fortis, introduced their latest collections to the public digitally, using pictures and links. The Facebook page also gave room to lots of lesser-known brands. During this 4-day fair there were also forum discussions about the latest developments in the watch industry.

DIGITAL TIDES

The tide is a natural phenomenon that is directly associated with time. For sailors it is extremely important to know when it is high tide and low tide. A tide table is therefore a kind of bible for professional yachters and sailors. ChronGlobal came up with an idea: the Tide Chronoscope mobile phone app. This application shows you the tides in a simple, watch-size graphic depiction. Not just for fishermen and sailors, of course: also useful for recreational sailing! www.chronglobal.com



ATTEND THE VOLVO OCEAN RACE WITH IWC

IWC is raffling off online VIP tickets to the Volvo Ocean Race, one of the most difficult around-the-world yacht races. The VIP tickets include plane tickets, hotel accommodation and an IWC Portuguese Yacht Club Chronograph. In addition you are entitled to participate in one of the harbour races, you will pay a visit to the Volvo Ocean Race Abu Dhabi Ocean Racing Boat and you will attend an exclusive meet-and-greet with the yachting team that is sponsored by IWC. The first "experience" took place during the start in Alicante, Spain, on 29 October. The second "experience" will be in Miami, Florida, on 19 May 2012. Want to be in the running for one of these tickets? Go to www.iwc.com/money-cant-buy-experiences before 16 March 2012, enter your details and answer this question: "Who established the International Watch Company in 1868?"

DONATE WITH JUST A CLICK

For some time now, Raymond Weil has been supporting the VH1 Save The Music Foundation, a non-profit organisation that aims to put music education back on the American curriculum. The Raymond Weil Facebook page now has a new function: for every click on the "Donate now" button the brand donates 1 dollar. www.facebook.com/raymondweil



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THE WATCH WORLD'S COMEBACK KID

The striking return to form of Zenith watches is not the first time the *manufacture* has been saved from disarray. 00/24 WatchWorld looks into the past to find a parallel with the present.



A fascinating insight into the fluctuating fortunes of Zenith is to be found, strangely enough, at the top of a shabby stairwell in the back of its Swiss HQ. Clamber up a few floors and you arrive at a rickety landing held together with wooden slats. It's not an area people come to now – the paint is peeling, and a rust-coated industrial chain dangling from a pulley hasn't born a heavy load in years. But the landing leads through to a ramshackle attic containing a horological treasure horde.

The room is stuffed with dust-coated watch tooling. Beneath the eaves, shelves sag with scores of old stamping presses and cutting tools; hundreds of base plates and movement blanks are stacked on tables, unmoved in decades; peculiar appliances with tubes, dials and gauges are swamped in piles of wires and the unquantifiable clutter of long-forgotten workshops.

This room and its arcane contents in fact represent Zenith's salvation from the ignominy of being converted, in the 1970s, into a producer

of cheap quartz watches. It makes for an intriguing parallel with the manufacture's current reawakening from misadventure and striking return to form.

CHARLES VERMOT

So, the backstory. In 1971 Zenith, a brand always renowned for its technical excellence and the record-breaking precision of its watches, was taken over by Zenith Radio Corporation, a US electronics manufacturer with a need to clear out branding confusions and an eye on the burgeoning quartz market. In 1975 the management decided to strip the Le Locle factory of its production equipment for mechanical watches. This would include tooling for the El Primero, Zenith's magnificent, world-first integrated chronograph movement, which wowed the industry with its high-beat speed and accuracy on its 1969 launch.

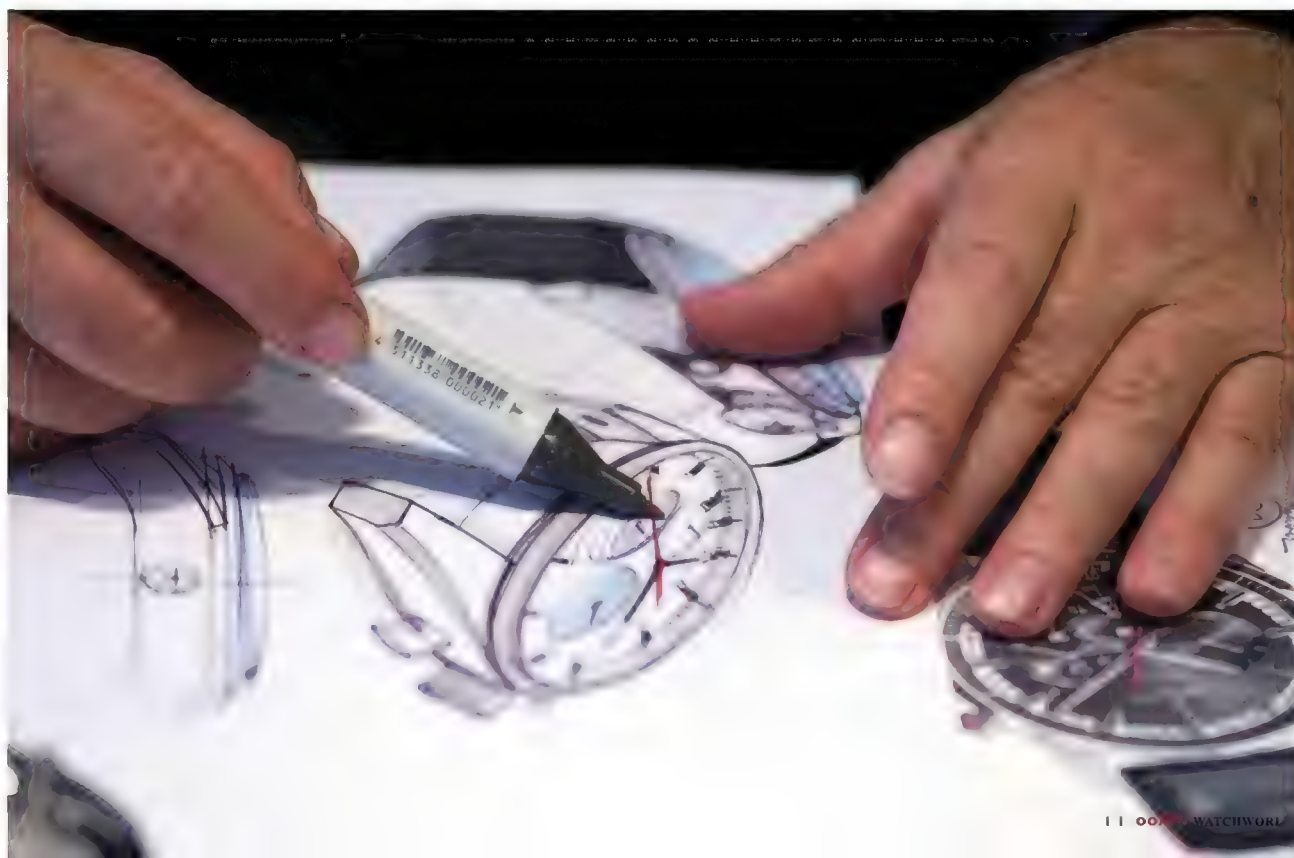
The head of the chronograph studio, Charles Vermot, had other ideas, and stashed vital El

Primero equipment and parts in the aforementioned attic. When the American company lost interest and sold the watch business in the late 1970s, thanks to Vermot Zenith still had the capacity to make El Primero movements. Bear in mind that a single stamping press cost 40,000 francs, and the El Primero required over 150 of them – sums that a newly uncoupled Zenith could never have run to. As well as putting them in its own watches, the company supplied the calibres to other brands – most famously to Rolex for its Daytona chronograph. Slowly but surely, Zenith crept back into life as a serious watch *manufacture*. "He was a genius, he saved the company," says current CEO Jean-Frederic Dufour of Monseigneur Vermot. "If it wasn't for him, Zenith would have been an empty shell."

DEFY

A cynic might argue that Zenith had become a different kind of empty shell by the time Dufour, formerly of Chopard, landed in the hot seat in

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ZENITH WATCHMAKER AND JEAN LOUIS ÉTIENNE, EXPLORER



EL PRIMERO FLYBACK STRATOS

2009. His predecessor, Thierry Nataf, took the brand in an ostentatious direction that may well have reflected the exuberance of the boom years – and gained much attention for Zenith in the process – but with hindsight seems a recklessly eccentric departure from its heritage. To put it another way, the watches – in particular the big-ticket Defy range – were aesthetic and conceptual goofs. Retailers didn't want them in their shop windows and customers, even if they could afford them, didn't want them on their wrists. "It was too much on the fashion side," says Dufour. "When you're a *manufacture*, you can't be driven by fashion. All the eggs were in the Defy basket, and the concept was just too high to fade the economic crisis."

NEW REFERENCES

It's the speed with which Dufour has carried out his mission to return Zenith to its roots – classic timepieces, technical excellence, El Primero to the fore – that has been surprising. He's not only replaced the previous collection with a slew of neo-retro pieces – a remarkable 130 new references in just two years – but is doing so at price points that lay down a challenge to his competitors. Consider the latest innovation, for instance, the Winsor (we'll forgive what seems a spelling mistake to an English audience). A combination of El Primero movement and ingenious annual calendar complication in the dressy Captain range, it has a guide price of just £6,300 –

remarkably affordable for a watch of serious complexity made in-house. Then there's the new El Primero Pilot, a smart, black-dial aviation piece with two subdials, which retails at under £5,000. For the price of many chronographs with standard ETA calibres, you get a watch produced entirely in-house containing the best series-produced chronograph movement on the market.

ZENITH-MADE

"I've flipped around the pyramid," says Dufour. "We had a really low offer at the bottom of the range and a large offer on the top, and I decided we should do the opposite, with an entry-level price point that was lower by €1,000. Our aim is simply to be the best quality in the segment from €5,000 to €10,000."

Dufour's astute enough to realise that producing more affordable watches doesn't affect the brand's prestige when you emphasise the quality of the offer, the heritage from which it stems – it's remarkable that Zenith still creates its watches on the same site as it did in 1865 – and the fact of every piece containing a Zenith-made movement. Zenith is positioned to compete with Rolex, for instance, but with the one added value the uber-brand can never claim. "We're exclusive – we've produced in 40 years the same number of watches Rolex produces a year," Dufour says. "In the world of *manufacture* you cannot produce what we do at the price we do. Other brands can't do this. This is our victory, and it's because we've done it for 150 years."

The next step in Dufour's revolution is a major reorganisation of the factory itself, with the paraphernalia in the attic – the remnants of M. Vermot's heroic act – eventually to be housed in a new Zenith museum. For the time being, the room still acts as a reminder that when wrong turns are taken, a brand's way back is often by doing again what it always did best. ■



EL PRIMERO PILOT ACIER

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ONLY WATCH 2011

RESULT: 3.9 MILLION POUNDS FOR CHARITY

Once again Patek Philippe made headlines. This time with a unique timepiece at the Only Watch 2011 auction held in Monaco, thanks to a unique watch which was especially made for this event.

Only Watch is a bi-annual auction that funds money for children with Duchenne Muscular Dystrophy. A disorder that causes reduced muscle strength, especially in arms and legs, but also breathing problems. The idea of the auction is simple and effective: watch manufacturers make specially for the auction an exceptional timepiece that they donate to the auction. Antiquorum, one of the biggest watch auction houses in the world, could auction 40 watches. On September 23 it resulted in exactly £3,324,180: twice as much as the result in 2009.



VAN CLEEF & ARPELS
£ 184,900

BLU
£ 258,000

RICHARD MILLE
£ 438,600

HARRY WINSTON
£ 137,600



Read more about Only Watch 2011 on www.oo24watchworld.co.uk.

SATISFIED

Under the continuing support of H.S.H. Prince Albert II of Monaco, patron of the foundation, the auction had auction room attendees, as well as online and telephone bidders, enthralled. The former group included the CEO's of some of a number of watch companies offering pieces. One of the many spectacular watches that got a great result was the MB&F HM4 Thunderbolt Flying Panda to which the Chinese artist Huang Hankang added a playful miniature solid gold detachable "flying panda" riding the watch. A wonderfully childish approach to horology that saw a £146,200 winning bid, making it the sixth highest result of the day. "I am very happy for Luc Pettavino and his amazing drive to make a better world. It makes all we have done worthwhile," wrote Maximilian Büsser of MB&F on his Facebook profile after the auction. Luc Pettavino is the president of the Association of Monégasque contre les Myopathies and founder of Only Watch. Harry Winston also proved that its watches are popular with the watch aficionados and connoisseurs around the world. The platinum 45mm Mid-night GMT Tourbillon Refined complication offers a worldtimer indicator featuring Monaco as one of the 24 cities applied to the disc. The unique watch received a winning bid of £137,600. Van Cleef & Arpels is famed for its dreamy, decorative watches that often tell a story, and the Poetic Complication is no exception. A beautiful, hand-made champlevé enamel black jade dial dominates the white gold watch, a fascinating piece with hands shaped as a rocket and star. This

truly spectacular watch received an equally spectacular result of £184,900.

The BLU Gagarin Platinum Flying Tourbillon is a wonderful timepiece featuring a large flying tourbillon as well as a magnifying glass that can be turned to get a closer look at the cities printed on the dial, as well as the impressive decoration of the world. Named after Yuri Gagarin, whose debut space flight occurred 50 years ago this year, and is engraved with "First Man in Space - 12 April 1961 - Duration 108 Min" on the case-back. This watch received a winning bid of £258,000.

EXCEPTIONAL

Unconventional designs seemed to rock the auction. Sure enough, the DeWitt "X-Watch" of titanium and steel looks more like a prop from the "Transformers" than a wrist watch. Looking at this watch you can't help thinking of what it would transform into if you push on a secret hidden button. However, rather than an intergalactic robot the X-Watch offers instead double bi-retrograde hours and minutes, visible

one-minute tourbillon and power reserve on the front side, chronograph on the reverse, registers and power reserve indication. The X-Watch received a winning bid of £352,600.

MASTERPIECE

Self-proclaimed petrolhead Richard Mille is known for his over-the-top designs and remarkable horological creations, though the already-famed RM 027 worn by tennis star Rafael Nadal is neither a unique nor new watch. However the lightweight tourbillon watch of only 21 grams is actual worn by the winning tennis player when he won the 2011 Monte Carlo championship. The watch received a winning bid of £438,600 which is pretty much the suggested retail price of the normal RM 027 that was produced in 50 pieces - and sold out, mind you! Unsurprisingly Patek Philippe was the showstopper and a true bidding frenzy started when the unique steel reference 3939 with tourbillon and minute repeater was offered. Reference 3939 was previously only offered in platinum or gold, which makes this steel version highly collectable and a treasured timepiece for the winner of the auction. The winning bid was a stunning 1.2 million pounds, an amount that had the auction room almost boil over with excitement, and several high fives among the impressed onlookers. ■



MB&F
£ 146,200

DEWITT
£ 352,600

PATEK PHILIPPE
£ 1,200,000

Ladies First

A good watch is not just a privilege for men: women also place high demands on what they wear on their wrist. 00/24 WatchWorld makes a selection of the latest top models for her.



Oris AQUIS MID-SIZE

This is a watch in the increasingly popular mid-size range: the 36mm. The case is made of steel and, thanks to a screwed-in crown, water resistant to 300m. The bezel is made of steel or ceramic and is unidirectional. There is a version that has diamonds as the hour indicators on the white or black dial. The strap is black or white rubber with a folding clasp. Prices start at £1070. www.oris.ch



Zenith EL PRIMERO 36,000 VPH 38MM LADY

Zenith is adding a women's watch to its successful (mainly masculine) El Primero 36,000 VPH line: a chronograph with an automatic movement (the new El Primero 400 calibre), but with a smaller case diameter, namely 38mm. The look of the watch will appeal to women thanks to its rose gold case, with 120 diamonds on the bezel and a further 44 on the case. The dial features a small seconds hand (9 o'clock) and date indicator (half past 4). The chronograph consists of a subsidiary dial with 12-hour indicator (6 o'clock), 30-minute indicator (3 o'clock), chronograph hand and tachymeter scale. www.zenith-watches.com

Nomos TETRA+

German watch manufacture Nomos has somewhat of a reputation when it comes to producing series of watches with differently coloured dials. With the Tetra+ the brand takes things a step further. The well-known Tetra model with its square case is now available in four special versions in which the colour of the dial is identical to that of a pair of matching ladies' gloves supplied by renowned brand Roekl. If possible the names are even more beautiful than the watches: Mäusedorn, Erzgebirgsperle, Burgundertrüffel and Blasser Zonenmilchling. Prices from £1,030. Please note: not all Nomos dealers sell these models. www.nomos-glashuette.com



Raymond Weil JASMINE

Jasmine is a completely new women's collection from Raymond Weil, with a choice of a quartz movement or a mechanical movement (38-hour power reserve), stainless steel or rose gold, the well-known round case with a diameter of 29 or 35mm and a bracelet of steel, steel with rose gold, or a leather strap. The watches are also available with diamonds if desired. The silver dial has blue hands, Roman numerals and a date indicator at 3 o'clock. Prices start at £1,020. www.raymond-weil.com



For the complete sales info, visit www.0024watchworld.co.uk.

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Ladies First

Bulgari BULGARI

The designers at Bulgari can't get enough of it: the new Bvlgari Bvlgari collection, which has been a success for the past 34 years, consists of 14 different models that are available with a quartz movement (with a 26mm case) and a mechanical movement (33mm and 37mm), in steel or rose gold. And of course the famous double Bulgari logo is incorporated into the bezel. The mother-of-pearl dial depicts the hours with Roman numerals or with diamonds. Each watch has an interchangeable strap so it can be made to suit to any occasion. The medium sized watch (33mm) is available for approximately £8,100. www.bulgari.com



Ebel BRASILIA GOLD

Don't expect sporty models from Ebel but rather classical, very feminine and high-quality watches, like the new Brasilia: a quartz watch with a rectangular case of just 23.7mm with a silver-coloured guilloché dial in the middle and blue hands. Roman numerals depict the hours. The Ebel signature is incorporated at 3 o'clock: two "E's" back-to-back. The yellow gold version is available for approximately £10,300 and the yellow gold version inlaid with 34 diamonds from £12,000. www.ebel.com



Omega LADYMATIC

Omega presented its latest women's collection, "Ladymatic": the watches come in rose gold with a brown dial. When looking at the case (34mm) the bezel, richly embellished with diamonds, stands out. The case-back features a sapphire crystal through which the movement (calibre 8521) can be seen. This movement uses the silicon Si 14 balance spring, which makes the watch more resistant to shocks. Available from £23,300. www.omega.com



Richard Mille

RM 051 PHOENIX-MICHELLE YEOH

Finally: Richard Mille has managed to "translate" his striking style into a women's watch! For the design Richard Mille solicited the assistance of none other than movie actress Michelle Yeoh, seen in "The Mummy", "Memoirs of a Geisha" and "Tomorrow Never Dies" among others. It is a light, elegant and romantic watch with clear Asian influences. The dial depicts a Phoenix; according to Chinese legend this is the symbol for the Empress and one of the friendliest birds. Another symbolic component is the black onyx, said to be capable of eliminating negative feelings. The RM 051 is available in a limited edition of eighteen, price upon request. www.richardmille.com



For the complete sales info, visit www.oo24watchworld.co.uk.



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vinniejones

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